Based on new NCISM Syllabus

Textbook of

RASASHASTRA AND BHAISHAJYA KALPANA

AYURVEDIYA AUSHADHI PRAYOGA VIGYANA

DR. JYOTI SHARMA

Salient Features:–

- Aligned with the new NCISM syllabus with detailed and understandable descriptions of all formulation concepts.
- Comprehensive coverage of traditional and contemporary Ayurvedic formulations with step-by-step preparation and standardization guidance.
- Research updates, recent advancements, and clinical applications with case studies for practical understanding.
- References to classical Ayurvedic texts and modern research articles, featuring contributions from renowned experts.
- Emphasis on the therapeutic efficacy and safety of various formulations.
- User-friendly layout with comprehensive therapeutic coverage, tables, key points with chapter summaries.
- Contributions from renowned experts and practitioners in the field.
- Practice questions, answers, and MCQs for exam preparation and student confidence.

PART–2

FIRST EDITION

As per the competency-based Ayurveda Medical Curriculum

CONTENTS

Acknowledgement vii
Preface viii
Syllabus–NCISM ix
List of Abbreviation xviii

1. Aushadhi Prayoga Vigyana **1-9**
1.1 Concept of Aushadhi 1
1.2 Prashasta Bheshaja Lakshana 2
1.3 Synonyms of Chikitsa 2
1.4 Dosage forms used in Ayurvedic formulations include 2
1.5 Aushadha Matra 2
1.6 Aushadha Sevana Kala 3
1.7 Anupana 4
1.8 Pathya Apathaya 4
1.9 Pharmacology 5
1.10 Route of Drug Administration 6
1.11 Bioavailability 6
Multiple Choice Questions 8

2. Single Drug (Herbal & Mineral) **10-67**
2.1 Guduchi 10
2.1.a Guduchi Svarasa 11
2.1.b Guduchyadi Churna 12
2.1.c Guduchi Kvatha 13
2.1.d Guduchi Hima 16
2.1.e Guduchi Ghana — Samshamani Vati 16
2.1.f Guduchi Sattva 18
2.1.g Amritadi Guggulu 19
2.1.h Amritarishta 20
2.2 Amalaki 22
2.2.a Amalaki Svarasa 23
2.2.b Amalakyadi Churna 24
2.2.c Triphala Rasayana 25
2.2.d Chyavanaprasha 26
2.2.e Dhatri Lauha 28
2.2.f Amalakyadi Gutika 30
2.2.g Phalatrikadi Kvatha 31
2.2.h Triphala Ghrita 32
2.3 Bhallataka 33
2.3.a Bhallataka Modaka 34
2.3.b Bhallataka Ghrita 35
2.3.c Bhallataka Guda 37
2.3.d Bhallatakadi Taila 39
2.3.e Bhallataka Avaleha 40
2.3.f Bhallatakadi Lepa 41
2.3.g Bhallatakadi Kvatha 41
2.3.h Toxicity Study and its Management: 42
2.4 Gandhaka 43
2.4.a Gandhaka Churna 44
2.4.b Gandhaka Rasayana 45
2.4.c Gandhaka Druti 47
2.4.d Gandhaka Taila 48
2.4.e Gandhakadya Malahara 49
2.4.f Gandhakadi Lepa 51
2.4.g Gandhaka Vati 51
2.5 Gairika (Red Ochre) 53
2.5.a Gairika Pradeha 54
2.5.b Laghusutashekhara Rasa 55
2.5.c Gairikadya Malahara 56
2.5.d Gairikadya Gutikanjana 57
2.5.e Gairika Rasakriya 58

2.5.f Varnakara Lepa 58
Multiple Choice Questions 59
3. Single Drug (Bhasma, Shuddha & Pishti) 68-96
3.1 Abhraka Bhasma 68
3.2 Svarna Makshika Bhasma 70
3.3 Svarna Bhasma 72
3.4 Rajata Bhasma 73
3.5 Lauha Bhasma 75
3.6 Tamra Bhasma 76
3.7 Vanga Bhasma 77
3.8 Naga Bhasma 79
3.9 Yashada Bhasma 80
3.10 Kashisha Bhasma 81
3.11 Shuddha Shilajatu 82
3.12 Shuddha Gandhaka 83
3.13 Shuddha Gairika 84
3.14 Shuddha Kankshi 85
3.15 Mukta Pishti 85
3.16 Mukta Bhasma 85
3.17 Pravala Pishti 86
3.18a Pravala Bhasma 87
3.18b Vajra Bhasma 88
3.19 Kaparda Bhasma 89
3.20 Shankha Bhasma 90
3.21 Godanti Bhasma 90
3.22 Shuddha Tankana 91
Multiple Choice Questions 92
4. Aushadhi Kalpa - I
(Compound Formulations) 97-138
4.1 Kharaliya Rasayana 97
4.1.a Arogyavardhini Gutika 97
4.1.b Kumara Kalyana Rasa 100
4.1.c Garbhapala Rasa 101
4.1.d Chandraprabha Vati 103
4.1.e Pravala Panchamrita Rasa 105
4.1.f Anandabhairava Rasa 106
4.1.g Yogendra Rasa 108
4.1.h Lakshmivilasa Rasa 109
4.1.i Vasantakusumakara Rasa 111
4.1.j Vasantamalati Rasa 112
4.1.k Brihat Vata Chintamani Rasa 113
4.1.l Shankha Vati 115
4.1.m Shvasakuthara Rasa 116
4.1.n Kamadudha Rasa 117
4.1.o Sutashekhara Rasa 118
4.1.p Navayasa Loha 120
4.1.q Ichchhabhedi Rasa 121
4.1.r Krimikuthara Rasa 122
4.2 Parpati Rasayana 124
4.2.a Panchamrita Parpati 125
4.2.b Bola Parpati 126
4.3 Kupipakva Rasayana 127
4.3.a Svarna Vanga 128
4.3.b Makaradhvaja 129
4.3.c Samirapannaga Rasa 131
4.4 Pottali Rasayana 132
4.4.a Hemagarbha Pottali 133
Multiple Choice Questions 135
5. Aushadhi Kalpa-II
(Compound Drugs/Formulations) 139-180
5.1 Dashamula Kvatha 139
5.2 Mahamanjishthadi Kvatha 140
5.3 Pushyanuga Churna 142
5.4 Sudarshana Churna 143
5.5 Lavana Bhaskara Churna 145
5.6 Bilvadi Gutika 146
5.7 Chitrakadi Gutika 148
5.8 Sanjivani Vati 149
5.9 Vyoshadi Vati 151
5.10 Bala Chaturbhadra Rasa 152
5.11 Simhanada Guggulu 153
5.12 Yogaraja Guggulu 155
5.13 Chyavanaprasha Avaleha 156
5.14 Dadimavaleha 158
5.15 Panchagavya Ghrita 160
5.16 Brahmi Ghrita 161
5.17 Narayana Taila 163
5.18 Nilibhringadi Taila 165
5.19 Panchaguna Taila 166
5.20 Aravindasava 167
5.21 Ashokarishta 168
5.22 Kumaryasava 170
5.23 Kutajarishta 171
5.24 Gandhakadya Malahara 173
5.25 Lepa Guti 174
Multiple Choice Questions 175
6. Dosage Forms & Cosmetic Products 181-194
6.1 Introduction of Different Dosage Form 181
6.2 Importance of Dosage Forms 181
6.3 Principles of Dosage Form Design 182
6.4 Primary Reasons for Designing

a Dosage Form 182
1. Protection 182
2. Improve Therapeutic Activity 183
3. Patient Compliance 183
6.5 Classification of Dosage Forms 183
1. Solid Dosage Forms 183
2. Liquid Dosage Forms 183
3. Semi-Solid Dosage Forms 184
6.6 Cosmetic Products 184
6.7 Advantages and Disadvantages of Currently Available Dosage Forms 185
1. Oral Dosage Forms 185
2. Topical Dosage Forms 186
3. Parenteral Dosage Forms 186
4. Inhalation Dosage Forms 186
5. Rectal and Vaginal Dosage Forms 186
6. Sublingual and Buccal Dosage Forms 186
6.8 Modification of Classical Ayurvedic Dosage 186
6.9 Route of Drug Administration 187
6.10 Research Updates 191
Multiple Choice Questions 192

7. Nutraceuticals 195-213
7.1 Kushmanda Avaleha 195
7.2 Preenana Modaka 197
7.3 Chyavanaprasha Avaleha 198
7.4 Phala Ghrita 200
7.5 Saubhagya Shunthipaka 202
7.6 Shatavari Ghrita 203
7.7 Arjuna Kshirapaka 205
7.8 Rasona / Lashuna Kshira Paka 206
7.9 Kharjuradi Mantha 207
7.10 Brahma Rasayana 208
Multiple Choice Questions 210

8. Anupana Prayoga for Aushadhi Kalpa 214-226
8.1 Kaishora Guggulu 214
8.2 Yogaraja Guggulu 215
8.3 Narayana Churna 217
8.4 Rasa Sindura 219
8.5 Rasa Parpati 221
8.6 Kankayana Vati 222
Multiple Choice Questions 224

9. Aushadhi Prayoga Marga 227-258
9.1 Mukhya Prayogartha Kalpana 227
9.2 Nasya Kalpana 230
9.3 Karna Kalpana 231
9.4 Akshi Kalpana 232
9.5 Tvak Kalpana 236
9.5.a Shirodhara 239
9.5.b Abhayanga 240
9.5.c Ashti Bhagna 242
9.5.d Vrana 244
9.5.e Smashru 245
9.5.f Kesha Ghanata 247
9.5.g Akala Palita 248
9.5.h Indralupta 249
9.5.i Lomashatana 250
9.6 Guda Marga 252
9.7 Mutra Marga 253
9.8 Yoni Marga 254
Multiple Choice Questions 256

10. Rational Prescription along with Safe Dispensing of Ayurvedic Formulations 259-263
10.1 Introduction 259
10.2 Rational Prescription 259
10.3 Safe Dispensing 259
10.4 Additional Guidelines for Rational Use of Ayurvedic Formulations 260
Multiple Choice Questions 262

11. Traditional & Local Health Practices & TKDL 264-272
11.1 Introduction to Traditional and Local Health Practices and Government Initiatives to preserve it 264
11.2 Traditional Knowledge Digital Library (TKDL) 265
Multiple Choice Questions 272

12. Pharmacovigilance for Ayurveda Drugs 273-278
12.1 Introduction 273
12.2 Important Terminology 273
12.3 History 273
12.4 Major Development in PV 273
12.5 PV Centers In India 274
12.6 Adverse Drug Reaction in Ayurveda 274
Multiple Choice Questions 278

Appendices 279-287
Appendix-I : Brief Introduction of Classical Doses form and their Method of Preparation 279
Appendix-II : List of Disease and its English Equivalent Terms 286
Appendix-III : Weight and Measures 287

Alphabetic Index 288-289
Bibliography 290

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LIST OF ABBREVIATION

A. Plants Part

1. A.R.	–	Arial Roots
2. Bl.	–	Bulb
3. Dr. Fr.	–	Dried Fruit
4. Dr. Sd.	–	Dried Fruit
5. Enm.	–	Endosperm
6. Exd.	–	Exudate
7. Fl.	–	Flower
8. Fr.	–	Fruit
9. Gl.	–	Gall
10. Ht. Wd.	–	Heart Wood
11. Lf.	–	Leaf
12. L.	–	Latex
13. Ol.	–	Oil
14. P.	–	Pericarp
15. Pl.	–	Plant (Whole)
16. Rz.	–	Rhizome
17. Rt.	–	Root
18. Rt. Bk.	–	Root Bark
19. Rt. Tr.	–	Root Tuber
20. Sd.	–	Seed
21. Stmn.	–	Stamens
22. St.	–	Stem
23. St. Bk.	–	Stem Bark

B. Books

1. A.A.G.S.	–	Ayurvediya Aushadhi Guna Dharma Shastra
2. A.F.I	–	The Ayurvedic Formulary of India
3. A.H.S	–	Ashtanga Hridaya Samihita
4. A.H.U.	–	Ashtanga Hridaya Uttarasthana
5. A.P.I	–	The Ayurvedic Pharmacopoeia of India
6. Ay. Pr.	–	Ayurveda Prakasha
7. Ay. Sa.S	–	Ayurveda Sara Sangraha
8. B.R.	–	Bhaishajya Ratnavali
9. Bha. Bha. R.	–	Bharata Bhaishajya Ratnakara
10. Bha. Pra.	–	Bhava Prakasha
11. Cha. D.	–	Chakra Datta
12. Cha.Sa.Chi.	–	Charaka Samhita Chikitsa Sathana
13. Ni. R. (Ma)	–	Shri Nighanturatnakara (Marathi)
14. Ra. Cha.	–	Rasachandashu
15. R.Mr.	–	Rasamritam
16. R.R.	–	Rasaratnakara
17. R.R.S.	–	Rasa Ratna Sammuchya
18. R.Sa.Sa.	–	Rasendra Sara Sangraha
19. R. Ta. Sa.	–	Rasa Tantra Sara
20. R.T.	–	Rasatarangini
21. R.Yo. Sa.	–	Rasayogaratnakara
22. Sa. Yo.	–	Sahasrayosa
23. Sha. S.	–	Sharngadhara Samihita
24. Si. Yo. Sa	–	Siddhayoga Sangraha
25. Si.Bhai.Ma.Ma.	–	Siddha Bhaishajya Manimala
26. Su. Sa.	–	Sushruta Samhita
27. Y.R.	–	Yoga Ratnakara

C. Common Term

Q.S. – Quantity Sufficient.

• • •

CHAPTER 1

AUSHADHI PRAYOGA VIGYANA

1.1 Concept of Aushadhi

Aushadha, meaning medicine or drug, is essential for health preservation and disease treatment. Aushadha can be used single or in combination. The Charaka Samhita lists 152 superior single drugs (agraya prakarana), the Ashtanga Sangraha lists 155, and the Ashtanga Hridaya lists 55. Aushadha is one of four healthcare aspects, along with the physician, attendant, and patient. All substances (dravya) derive from the five mahabhutas (prithvi, apa, agni, vayu, akasha), and the body is a composition of these elements in varying proportions. Imbalance in these proportions disrupts homeostasis, causing disorders. To restore balance, substances with the required mahabhuta composition are administered. Since aushadha is a dravya, it restores homeostasis and treats disease. Effective disease management requires correct identification, dosage, and timing of aushadha administration. Proper selection depends on understanding its mode of action, and to avoid adverse effects, aushadha must be patient-specific, location-specific, and season-specific. Examination of aushadha is crucial prior to use.

औषधिभिर्निविपन्नं व्याधिहितं तदुपलक्षण।
त्वात् सर्वं चिकित्सितमौषधं रूढम्।। (Gangadhar)

According to ancient scholars, aushadhi (medicine) is always beneficial (hita) for the patient (rogi). The term aushadhi comes as an upalaksana, where "upa" refers to upasarga (a prefix).

ओषो नाम रसः सोऽस्यां धीयते यन्तदोषधिः।
ओषादरोग्यमाद्यत्ते तस्मदोषधिरोषधः।। (Kashyapa Samhita)

Aushadha refers to substances that bear osa (also known as rasa), which leads to arogya (health). Therefore, aushadhi and oshadhi are synonymous. Generally, aushadha means preparations made from drugs to cure diseases and promote health.

संस्कारो हि गुणान्तराधस्नमुच्यते।
ते गुणास्तोयाग्निसन्निकर्षशौचमन्थनदेशकालवासनभावनादिभिः कालप्रकर्षभावनादिभिश्चाधीयन्ते।। (Cha. Vi. 1/22/2)

Aushadha kalpana involves preparing medicines by applying various processing techniques to crude drugs. This processing transforms the substances, enhancing their pharmacological actions (a process known as samskara). Common processing techniques include dilution, application of heat, cleansing, churning, storing, maturing, flavoring, and preservation in containers.

अल्पस्यापि महार्थत्वं प्रभूतस्याल्पकर्मताम्।
कुर्यात् संयोगविश्लेषकालसंस्कारयुक्तिभिः।। (Cha.Ka. 12/48)

There is no letter that is not a mantra (incantation), no root that is not a medicine, and no human being who is not useful. Only the yojaka (coordinator) is a rare commodity.

In a broad sense, any substance or mixture of substances intended for internal or external use to preserve and strengthen health, and to prevent or cure disease in humans or animals, is called aushadhi.

रोगभयं जयतीति भेषजम्।
भेषं रोगं जयतीति औषधम् इत्यमरः।। (Shabdakalpadruma)
तदेव युक्तं भैषज्यं यदारोग्याय कल्पते। (Cha. Su.1/134)

"Bheshaja" or "Bhaisajya" refers to substances or treatments that alleviate the fear of disease or restore health by balancing the doshas.

In Ayurveda, the concept of "Padacatushtaya" refers to the four categories of essential elements necessary for the sustenance of life. These categories are Bhesak (Physician), bhesaja (medicine), Paricharaka (Attendant), and Rogi (Patient). Among these, bhesaja, or medicine, holds a significant position, being essential for the treatment of diseases and the preservation of health.

1.2 Prashasta Bheshaja Lakshana

बहुता तत्रा योग्यत्वमनेकविध कल्पना संपच्चेति चतुष्कः अयं द्रव्याणां गुण उच्यतै। (Cha. Chi. 1/3)

बहुकल्पं बहुगुणं संपन्नं योग्यमौषधम्।। (A. H. Su.1/28)

Emphasizing bhesaja in Ayurvedic texts like those of Charaka and Vagbhata highlights its importance in maintaining well-being. Bhesaja, is valued for its applicability, quality richness, abundance, and versatility in addressing various health concerns. Hence Bhesaja is kept in second position among the padacatushtaya because of its great role in treatment grounds.

While food is essential for nourishment, medicine plays a vital role in restoring health during imbalances or diseases, emphasizing the significance of using appropriate medicines for overall health and illness management.

1.3 Synonyms of Chikitsa

चिकित्सितं व्याधिहरं पथ्यं साधनमौषधम्।
प्रायश्चित्तं प्रशमनं प्रकृतिस्थापनं हितम्।।
विद्यात् भेषजनामानि.....। (Cha. Chi. 1/3)

- Vyadhiharana
- Pathya
- Sadhana
- Aushadha
- Prayashcitta
- Prasamana
- Prakriti sthapana
- Hita

1.4 Dosage forms used in Ayurvedic formulations include

Kashayayoni, Panchavidha kashaya kalpana, Churna, Avaleha-Prasa, Ghana, Sattva, Vatika, Gutika, Candrika, Vataka, Pinda, Modaka, Varti, Guggulu kalpana, Masi kalpana, Lovana kalpa, Kasra kalpana, and Ksharasutra.

1.5 Aushadha Matra

"Matra" denotes a measure of various factors such as quantity, size, duration, number, or degree. In Ayurveda, consideration of dosha is crucial to achieve the desired therapeutic outcome. If the dose is excessive, it can lead to harmful side effects, while an insufficient dose may prove ineffective. Therefore, dosage should be carefully regulated to ensure that the drug produces the desired effects without harming the tissues. The determination of dosage should take into account both the condition of the disease and the individual characteristics of the patient.

स्थितिर्नास्त्येव मात्रायाः कालमग्निं वयो बलम्।
प्रकृतिं दोषदेशौ च दृष्ट्वा मात्रां प्रकल्पयेत्।।
(Sha. Pra. Kha.1/37-38)

The prescription of medicine does not adhere to a fixed dose applicable universally to all patients. Instead, the dosage varies based on several factors:

1. **Kala (Time)**: This includes considerations such as the season when the drug is administered.
2. **Agni (Digestive Power)**: The patient's ability to digest influences dosage.
3. **Vayas (Age)**: Dosage may differ based on the patient's age.
4. **Bala (Strength)**: The patient's overall strength and vitality are taken into account.
5. **Prakriti (Constitution)**: The individual's physical constitution is considered.
6. **Dosha (Nature of Dosha)**: The specific nature of the dosha involved in causing the disease.
7. **Desha (Habitat)**: The patient's habitat or geographical location is also a factor.

Physicians determine a suitable dose of medicine by considering these factors. There is no universally applicable dosage for everyone. Instead, the dosage of medicine is individualized based on factors such as time, digestive capacity, age, strength, constitution, dosha, and habitat.

Sharngadhara has proposed dosages based on age and preparations. According to his recommendations, for a one-month-old child, the dosage should be one ratti (125 mg), administered as a confection with milk, honey, sugar, and ghee. The dosage increases gradually at the rate of one ratti per month up to one year of age. Afterward, the dosage increment continues up to the age of seventy, and then gradually decreases in a regressive manner. This dosage regimen applies to both powders and pastes, whereas for decoctions, the dosage should be four times the specified amount.

POSOLOGY

- Posology is the branch of pharmacology that deals with the study of dosages and doses of medicines, as well as the factors influencing their administration.
- It involves determining the appropriate dosage of a drug for a particular patient based on various factors such as age, weight, gender, health status, and the severity of the condition being treated.
- Posology aims to ensure the safe and effective use of medications by providing guidelines for dosage regimens that optimize therapeutic outcomes while minimizing the risk of adverse effects.

- Calculating the dosage of medication based on age involves considering several factors such as the developmental stage of the individual, their metabolism, and their response to the medication.

Here's a General overview of how Dosage may be calculated according to Age:

1. **Infants and Newborns**: Dosage for infants and newborns is typically based on their weight rather than their age. Pediatricians often use weight-based dosing charts to calculate the appropriate dosage for medications :
   - Young Rule
   - Dilling Rule
2. **Children**: As children grow older, their dosage may be adjusted based on age and weight. Pediatric dosing guidelines take into account the child's age, weight, and sometimes body surface area to determine the appropriate dose.
3. **Adolescents**: Adolescents may require dosages similar to adults, but adjustments may still be made based on factors such as weight, developmental stage, and metabolism.
4. **Adults**: For adults, dosages are typically standardized based on average body weight and are often not adjusted solely based on age. However, individual factors such as liver or kidney function may still influence dosing.
5. **Elderly**: Elderly individuals may require lower dosages due to changes in metabolism, reduced organ function, and increased sensitivity to medications. Renal and hepatic function should be considered when calculating dosages for this population.

   It's essential to follow dosage guidelines provided by healthcare professionals or medication labels, as incorrect dosing can lead to adverse effects or reduced efficacy of the medication. Always consult with a healthcare provider for personalized dosage recommendations tailored to individual needs and circumstances.

1.6 Aushadha Sevana Kala

The pharmacokinetics of aushadha are influenced by the body's biological rhythm. Therefore, to achieve maximum health benefits, aushadha must be administered at the appropriate time based on factors such as the patient's disease, strength, and age. This optimal time for aushadha administration is known as "bheshaja kala" or "aushadha sevana kala" or "aushadha apeksha kala."

Various Ayurvedic texts mention different periods for administering aushadha. Ashtanga Sangraha lists eleven, while Charaka, Sushruta and Kashyapa mention ten. Sharngadhara, on the other hand, identifies five suitable periods for aushadha administration. These periods are essential considerations for maximizing the efficacy of treatment and ensuring the desired therapeutic outcomes.

According to Archarya Charaka

भैषज्यकालो भुक्तादौ मध्ये पश्चान्मुहुर्मुहुः।
सामुद्गं भक्तसंयुक्तं ग्रासग्रासान्तरं दश।। (Cha. Chi. 30/298)

1.	Bhuktadau -1	Early morning on empty stomach
2.	Bhuktadau -2	Before food
3.	Madhya	In between a single meal
4.	Pashchat -1	After morning food
5.	Pashchat -2	After evening food
6.	Muhurmuhuh	Frequently
7.	Samudga	Before and after food
8.	Bhaktasamyukta	Along with food
9.	Grasa	Along with each bolus of the food
10.	Grasantara	In between 2 bolus

According to Sushruta

तत्राभक्तं प्राग्भक्तम् अधोभक्तं मध्येभक्तम् अन्तराभक्तं सभक्तं सामुद्गम् मुहुर्मुहुर्ग्रासं ग्रासान्तरं च इति दशौषधकालाः।।
(Su.Uttar. 64/65)

1.	Abhakta	Without food
2.	Pragbhakta	Before food
3.	Madhyabhakta	In between a meal
4.	Adhobhakta	After food
5.	Sabhakta	Mixed along with the food
6.	Antarabhakta	In between 2 meals
7.	Samudga	Before and after food
8.	Muhurmuhuh	Again and again (frequently)
9.	Sagrasa	Along with each bolus of food
10.	Grasantara	In between two bolus

According to Vagbhata

अभक्तं प्राग्भक्तं मध्यभक्तम् अधोभक्तं समभक्तम् अन्तरभक्तं सामुद्गं मुहुर्मुहुः सग्रासं ग्रासान्तरं निशि च।। (A.S.Su. 23/12)

1.	Abhakta	Without food
2.	Pragbhakta	Before food
3.	Madhyabhakta	In between a meal
4.	Adhobhakta	After food
5.	Sabhakta	Mixed along with the food
6.	Antarabhakta	In between two meals
7.	Samudga	Before and after food
8.	Muhurmuhuh	Again and again
9.	Sagrasa	Along with each bolus of the food
10.	Grasantara	In between 2 bolus
11.	Nishi	Night at bed time

ACCORDING TO SHARNGADHARA

ज्ञेयः पञ्चविधः कालो भैषज्यग्रहणे नृणाम्।
किञ्चित्सूर्योदये जाते तथा दिवसभोजने।।
सायन्तने भोजने च मुहुश्चापि तथा निशि। (Sha. Pra. 2/2-3)

1.	Suryodaya	At sun rise time
2.	Divasabhojana	During day meals
3.	Sayantane	Evening times
4.	Muhurmuhuh	Repeatedly
5.	Nishi	At bed time

CHRONOTHERAPEUTICS

1. It refers to the science of timing drug administration to optimize treatment outcomes based on the body's natural biological rhythms.
2. This approach acknowledges that various physiological processes, such as metabolism, hormone levels, and organ function, follow circadian rhythms, which can influence the absorption, distribution, metabolism, and elimination of drugs.
3. By aligning drug administration with these rhythms, chronotherapeutics aims to enhance therapeutic efficacy, minimize side effects, and improve patient compliance.
4. This field is particularly relevant in conditions where disease symptoms or drug responses vary throughout the day, such as in asthma, hypertension, and cancer.
5. Chronotherapeutics emphasizes the importance of personalized medicine and considers factors such as the patient's age, sex, lifestyle, and disease status when determining optimal dosing schedules.

1.7 Anupana

Anupana refers to a substance or vehicle used as a medium to administer medicine. It plays a crucial role in enhancing the efficacy and absorption of the medicine, as well as mitigating any potential side effects. Anupanas can vary widely and may include water, milk, honey, ghee (clarified butter), juice, or specific herbal decoctions. The choice of anupana depends on factors such as the patient's constitution, the nature of the medicine, the desired therapeutic effect, and the doshic imbalance being addressed. Additionally, anupanas may also be selected based on taste, temperature, and other sensory properties to optimize the overall therapeutic experience and promote healing.

ANUPANA DEFINITIONS

- अनु पश्चात् पीयते इति अनुपानम्।। (Shabdakalpadruma)
- अनु पश्चात् वा अनु साकं पीयते इति अनुपानम्। (Cha. Su. 27/319; Chakrapani Tika)
- अन्नाद् अनु पश्चात् पीयते इति अनुपानम्। (Su. Su. 46/419; Dalhana Tika)
- अनुपानम् इति अनु पश्चात् पानम् तत्। (Sha. Ma. Kha. 8/4; Adhamalla Tika)
- अनु सह पश्चात् पीयते इति अनुपानम्।। (Dravyaguna 1st part)

SIGNIFICANCE OF ANUPANA

यथा तैलं जले क्षिप्तं क्षणेनैव प्रसर्पति।
अनुपानबलादङ्गे तथा सर्पति भेषजम्।। (Sha. Ma. Kh. 6/5)

Sharngadhara compares anupana to oil on water, illustrating its role in facilitating rapid absorption and assimilation of medicine.

स्थिरतां गतमक्लिन्नमन्नमद्रवपायिनः।
भवत्याबाधजनकमनुपानमतः पिबेत्।।
(V. P. Pra.Tritiya khanda 82)

Insufficient water consumption during meals can lead to dryness in the food, which affects its texture and moisture content. When food lacks moisture, it becomes harder to chew and swallow, which can slow down the digestive process. Proper digestion relies on the food being adequately moistened by saliva and gastric juices, allowing enzymes to break it down efficiently. Without sufficient moisture, this process becomes less effective, potentially leading to indigestion, discomfort, and nutrient malabsorption. Therefore, it's important to drink water regularly during meals to ensure that food remains moist and facilitates optimal digestion.

1.8 Pathya Apathaya

"Pathya" is indeed derived from the Sanskrit root word "Patha," which conveys the meaning of "a way or channel." In the context of Ayurveda, "Pathya" refers to a regimen or dietary guidelines that are considered beneficial or conducive to health. These guidelines suggest the appropriate lifestyle practices, dietary choices, and behaviors that support well-being and balance in the body. By following Pathya, individuals aim to maintain or restore health, aligning themselves with the natural rhythms and needs of their bodies.

पथ्यं पथोऽनपेतं यद्यच्चोक्तं मनसः प्रियम्।
यच्चाप्रियमपथ्यं च नियतं तन्न लक्षयेत्।। (Cha.Su. 25/45)

Pathya refers to dietary and lifestyle practices that are considered beneficial for health. These practices typically include foods, behaviors, and routines that help calm the mind, nourish the body, and promote overall well-being. Pathya emphasizes consuming

wholesome, nutritious foods, following a regular routine, and engaging in activities that support mental and physical health.

On the other hand, Apathya refers to practices that are considered detrimental to health. These may include consuming unhealthy foods, following irregular or unhealthy routines, and engaging in behaviors that disrupt mental and physical well-being. Apathya is the opposite of Pathya and is generally avoided or minimized to maintain optimal health according to Ayurvedic principles.

Pathya and Apathya principles are utilized both for disease prevention and treatment in Ayurveda. Vaidya Lolimbraja, in his book "Vaidyajivanam," describes a fundamental principle regarding Pathya and Apathya. He explains that the arrangement of diet, known as pathyaharvyavastha, is outlined in Ayurveda in a highly scientific manner. Pathya refers to a diet that is beneficial for both the mind and body, promoting health and well-being. In contrast, Apathya refers to a diet that negatively impacts the mind and body, leading to adverse effects on health. By adhering to Pathya guidelines and avoiding Apathya practices, individuals can support their overall health and prevent the onset or progression of diseases according to Ayurvedic principles.

Pathya encompasses various beneficial aspects of Dietary and Lifestyle practices, including:

1. **Satmya**: Compatibility with one's constitution or natural tendencies.
2. **Svasthahitakara**: Promoting health and well-being.
3. **Upashaya**: Alleviating or mitigating symptoms or diseases.
4. **Svasthavasthapalaka**: Supporting the maintenance of good health.
5. **Hita Ahara**: Consuming wholesome and nourishing foods.
6. **Svastha Aujaskara**: Enhancing vitality and energy.
7. **Shramakara**: Providing comfort and tranquility.
8. **Dhatu Avirodhi**: Supporting the proper functioning of bodily tissues.
9. **Sukha Parinamakara**: Leading to pleasant or favorable outcomes.
10. **Dhatu Samyakara**: Balancing and harmonizing bodily tissues.

Apathya, on the other hand, represents practices that are considered detrimental to Health, including:

1. **Asatmya**: Incompatibility with one's constitution or natural tendencies.
2. **Svastha Ahitakara**: Detrimental to health and well-being.
3. **Ahitakara**: Producing adverse effects or harm.
4. **Anupashaya**: Failing to alleviate or exacerbating symptoms or diseases.
5. **Asukha Parinamakara**: Leading to unpleasant or unfavorable outcomes.
6. **Ashramakara**: Disrupting comfort or tranquility.
7. **Dhatu Asamyakara**: Causing imbalance or disharmony in bodily tissues.

1.9 Pharmacology

Is the scientific field dedicated to researching the impacts of drugs on living organisms. It encompasses the investigation of how drugs interact with biological systems, including their mechanisms of action, therapeutic effects, side effects, and the factors influencing their absorption, distribution, metabolism, and excretion in the body. Pharmacology plays a crucial role in drug discovery, development, and utilization in the treatment and prevention of diseases. It provides insights into understanding drug actions, drug interactions, and the rational use of medications to optimize patient outcomes while minimizing adverse effects.

Pharmacokinetics is the branch of pharmacology that deals with the study of the movement of drugs within the body. It focuses on how drugs are absorbed, distributed, metabolized, and excreted over time. Pharmacokinetics involves the quantitative analysis of drug concentrations in various biological compartments, such as blood, plasma, tissues, and urine, as well as the determination of pharmacokinetic parameters such as absorption rate, distribution volume, clearance rate, and half-life. Understanding pharmacokinetics is crucial for optimizing drug dosing regimens, predicting drug interactions, assessing drug safety and efficacy, and individualizing drug therapy based on patient characteristics such as age, weight, renal function, and hepatic function.

Pharmacodynamics is the branch of pharmacology that focuses on understanding the biochemical and physiological effects of drugs on the body, as well as the mechanisms underlying these effects. It examines how drugs interact with their target molecules, such as receptors, enzymes, and ion channels, to produce their therapeutic or toxic effects. Pharmacodynamics also investigates the relationship between the dose of a drug and its pharmacological response, including factors such as potency, efficacy, and dose-response

relationships. Understanding pharmacodynamics is essential for predicting and optimizing the therapeutic outcomes of drugs, as well as for designing safer and more effective medications.

1.10 Route of Drug Administration

Refers to the method by which a drug is introduced into the body to achieve its desired effect. Various methods exist for administering drugs, such as:

1. **Oral**: Drugs are taken by mouth and swallowed, either in the form of tablets, capsules, liquids, or powders.
2. **Sublingual**: Drugs are placed under the tongue and absorbed through the mucous membranes, bypassing the digestive system and entering the bloodstream directly.
3. **Buccal**: Drugs are placed between the cheek and gum and absorbed through the buccal mucosa, entering the bloodstream directly.
4. **Rectal**: Drugs are inserted into the rectum and absorbed through the rectal mucosa, entering the bloodstream or exerting a local effect in the rectum or nearby tissues.
5. **Parenteral**: Medications are delivered through injection or infusion directly into body tissues or the bloodstream, encompassing intravenous (IV), intramuscular (IM), subcutaneous (SC), and intradermal (ID) routes of administration.
6. **Topical**: Drugs are applied to the skin or mucous membranes for local effects, such as creams, ointments, lotions, sprays, or patches.
7. **Inhalation**: Drugs are administered by inhalation into the lungs for systemic effects or to treat respiratory conditions, such as metered-dose inhalers, dry powder inhalers, nebulizers, or vaporizers.

NOTE : The choice of route of drug administration depends on various factors, including the properties of the drug, the desired onset and duration of action, the patient's condition, and patient preference. Each route has its advantages and disadvantages in terms of absorption, bioavailability, convenience, and potential adverse effects.

1.11 Bioavailability

Refers to the fraction or percentage of an administered dose of a drug that reaches systemic circulation and is available to exert its pharmacological effect. In other words, it measures the extent and rate at which the active ingredient of a drug is absorbed into the bloodstream and becomes available at the site of action.

Factors that can influence bioavailability include:

1. **Route of administration**: Different routes of administration (oral, intravenous, intramuscular, etc.) can affect how quickly and completely a drug is absorbed into the bloodstream.
2. **Absorption**: The drug's chemical properties, formulation, and presence of food or other substances in the gastrointestinal tract can affect its absorption.
3. **Distribution**: Once in the bloodstream, a drug may bind to proteins or distribute into tissues, which can affect its bioavailability.
4. **Metabolism**: Drugs may undergo metabolism by enzymes in the liver or other tissues, which can reduce their bioavailability.
5. **Elimination**: Clearance of a drug from the body through metabolism or excretion can also impact its bioavailability.

NOTE : Understanding bioavailability is important for optimizing drug therapy, as it determines the dose needed to achieve the desired therapeutic effect. It also helps in comparing different formulations of a drug or different routes of administration to ensure consistent and predictable drug levels in the body.

Chapter At A Glance

Concept of Aushadhi in Ayurveda

Aushadhi, derived from the Sanskrit term "aushadha," refers to medicine or drug essential for health preservation and disease treatment. The use of aushadi, whether as single substances or in combinations, plays a vital role in maintaining homeostasis and addressing imbalances in the body.

Classification and Sources

Single Drugs (Agraya Prakarana):

- Charaka Samhita: 152 superior single drugs
- Ashtanga Sangraha: 155
- Ashtanga Hridaya: 55

All substances (dravya) used as aushadhi are derived from the five mahabhutas (elements): prithvi (earth), apa (water), agni (fire), vayu (air), and akasha (ether). The body itself is a composition of these elements in varying proportions. Imbalances in these proportions disrupt homeostasis, leading to disorders. To restore balance, substances with the required mahabhuta composition are administered as aushadi.

Essential Components of Healthcare in Ayurveda

Aushadhi is one of the four pillars of healthcare, along with:

1. **Physician (Bheshaka)**: The knowledgeable and skilled healer.
2. **Attendant (Paricharaka)**: The caregiver who assists in treatment.
3. **Patient (Rogi)**: The individual receiving the treatment.

Examination and Administration

Effective Disease management with Aushadhi requires:

- Correct identification
- Proper dosage
- Timely administration

Proper selection depends on understanding the aushadi's mode of action. It must be tailored to the patient, location, and season to avoid adverse effects. Thorough examination of aushadi is crucial prior to its use.

Preparation (Aushadha Kalpana)

Aushadhi kalpana involves processing raw drugs to enhance their pharmacological actions (samskara). Techniques include:

- Dilution
- Application of heat
- Cleansing
- Churning
- Storing
- Maturing
- Flavoring
- Preservation

Dosage and Posology

Aushadha Matra (Dosage): The measure of quantity, size, duration, number, or degree is critical. Dosage considerations include:

- **Kala (Time)**: Season and time of day
- **Agni (Digestive Power)**: Patient's digestive ability
- **Vayas (Age)**: Patient's age
- **Bala (Strength)**: Patient's overall strength
- **Prakriti (Constitution)**: Individual's physical constitution
- **Dosha (Nature of Dosha)**: Specific nature of the dosha involved in the disease
- **Desha (Habitat)**: Patient's geographical location Sharngadhara suggests age-based dosages, especially for infants and the elderly, adjusting gradually as per individual needs.

Chronotherapeutics

Aligning drug administration with the body's biological rhythms enhances therapeutic efficacy and minimizes side effects. This field considers circadian rhythms in various physiological processes, aiming for personalized medicine.

Anupana (Adjuvant)

Anupana is a vehicle or medium for administering medicine, such as water, milk, honey, or specific herbal decoctions. It enhances the efficacy and absorption of the medicine while mitigating potential side effects. The choice of anupana depends on factors like the patient's constitution, the nature of the medicine, and the doshic imbalance.

Pathya and Apathya

- **Pathya**: Refers to dietary and lifestyle practices beneficial for health :
  - **Satmya:** Compatibility with one's constitution.
  - **Svasthahitakara:** Promoting health and well-being
  - **Upashaya:** Alleviating symptoms.
  - **Hita Ahara:** Wholesome and nourishing foods.

- **Apathya**: Practices detrimental to health :
  - **Asatmya**: Incompatibility with one's constitution.
  - **Svastha Ahitkara**: Detrimental to health.
  - **Anupashaya**: Failing to alleviate symptoms.
- **Pharmacokinetics involves**: examining how drugs are absorbed, distributed, metabolized, and excreted within the body.
- **Pharmacodynamics focuses**: on understanding the biochemical and physiological effects of drugs and the mechanisms by which they exert their actions.

ROUTES OF DRUG ADMINISTRATION

- Oral
- Sublingual
- Buccal
- Rectal
- Parenteral (IV, IM, SC, ID)
- Topical
- Inhalation

Bioavailability: The fraction of an administered dose reaching systemic circulation and exerting its pharmacological effect.

NOTE : Understanding and applying these principles ensures that aushadi in Ayurveda is used effectively for treating diseases and maintaining health, emphasizing personalized treatment based on individual needs and conditions.

MULTIPLE CHOICE QUESTIONS

1. What is the primary goal of Aushadha (medicine) in Ayurveda?
a. To enhance physical strength
b. To restore homeostasis and treat disease
c. To improve mental clarity
d. To provide nutritional supplements

2. Which of the following is NOT one of the four essential healthcare aspects in Ayurveda?
a. Physician (Bheshaka)
b. Medicine (Bheshaja)
c. Diet (Pathya)
d. Patient (Rogi)

3. What does the term 'Anupana' refer to in Ayurveda?
a. The main ingredient in a medicine
b. A method of preparing medicine
c. A substance or vehicle used as a medium to administer medicine
d. A specific type of Ayurvedic treatment

4. Which factor is NOT considered when determining the appropriate dose of aushadha in Ayurveda?
a. Time (Kala)
b. Digestive power (Agni)
c. Patient's favourite food
d. Patient's age (Vayas)

5. What is the meaning of 'Samskara' in the context of Aushadha kalpana?
a. The selection of appropriate herbs
b. The process of preparing and transforming crude drugs
c. The administration of medicine to the patient
d. The evaluation of a patient's condition

6. Which of the following is a synonym for 'Chikitsa' in Ayurveda?
a. Vyadhiharana
b. Anupana
c. Kalpana
d. Dosha

7. What does 'Pathya' in Ayurveda refer to?
a. Harmful dietary practices
b. Beneficial dietary and lifestyle practices
c. Medicine dosage
d. Diagnostic techniques

8. In Ayurvedic posology, what is the primary consideration when calculating the dosage of a drug?
a. The colour of the medicine
b. The patient's blood type
c. The patient's age, weight, and constitution
d. The cost of the medicine

9. According to Sharngadhara, how many suitable periods are identified for aushadha administration?
a. Three
b. Five
c. Seven
d. Ten

10. Chronotherapeutics in Ayurveda involves:
a. Timing drug administration to align with biological rhythms
b. Mixing medicines with food
c. Administering drugs only at night
d. Combining different drugs for better efficacy

11. Which route of drug administration involves placing the drug under the tongue for absorption through the mucous membranes?
a. Oral
b. Buccal
c. Sublingual
d. Rectal

12. **Which route of drug administration bypasses the digestive system and directly enters the bloodstream?**
    a. Oral
    b. Sublingual
    c. Rectal
    d. Topical

13. **Which of the following is a parenteral route of drug administration?**
    a. Intravenous (IV)
    b. Oral
    c. Topical
    d. Inhalation

14. **Which factor does NOT influence the bioavailability of a drug?**
    a. Route of administration
    b. Drug distribution
    c. Patient's age
    d. Drug metabolism

15. **Bioavailability refers to:**
    a. The rate at which a drug is eliminated from the body.
    b. The fraction of an administered dose that reaches systemic circulation.
    c. The speed at which a drug is distributed to tissues.
    d. The amount of drug needed to achieve a therapeutic effect.

16. **Which route of drug administration is typically used for local effects on the skin or mucous membranes?**
    a. Oral
    b. Topical
    c. Rectal
    d. Intramuscular

17. **Which route of administration is most likely to be affected by the presence of food in the gastrointestinal tract?**
    a. Oral
    b. Intravenous
    c. Inhalation
    d. Topical

18. **In which route of administration are drugs absorbed through the rectal mucosa?**
    a. Oral
    b. Buccal
    c. Rectal
    d. Sublingual

19. **Which of the following routes is used for drugs administered by inhalation into the lungs?**
    a. Topical
    b. Buccal
    c. Oral
    d. Inhalation

20. **What does bioavailability measure in pharmacology?**
    a. The maximum concentration of a drug in the bloodstream.
    b. The fraction of an administered dose that is metabolized by the liver.
    c. The extent and rate at which the active ingredient is absorbed into the bloodstream.
    d. The duration of time a drug remains in the body.

Answers Keys

1.	b	2.	c	3.	c	4.	c	5.	b
6.	a	7.	b	8.	c	9.	b	10.	a
11.	c	12.	b	13.	a	14.	c	15.	b
16.	b	17.	a	18.	c	19.	d	20.	c

Short Answer Questions (SAQ)

- Lakshana of Prashastha Bheshaja
- Scope of Aushadhi Prayoga Vigyana.
- Explain Aushadha Sevana Kala
- Explain Aushadha Prayoga Marga.
- Short Note on Pathya- Apathaya.

Long Answer Questions (SAQ)

- Expalin Aushadhi Prayoga Vigyana, including its etymology, scope, and the characteristics of Prashastha Bheshaja Lakshana in detail?

• • •

CHAPTER 2

SINGLE DRUG (HERBAL & MINERAL)

2.1 Guduchi

Reference: The Ayurvedic Pharmacopoeia of India, Part-01, Volume 01, Pg. 70.

Guduchi consists of dried, mature pieces of the stem of Tinospora cordifolia (Willd.) Miers., a member of the family Menispermaceae. This perennial climber is found throughout tropical India. The drug is collected during the summer, preferably in the month of May, and can also be used in its fresh form.

SYNONYMS

- **Sanskrit:** Amritavalli, Amrita, Madhuparni, Guduchika, Chinnodbhava
- **Assamese:** Siddhilata, Amarlata
- **Bengali:** Gulancha
- **English:** —
- **Gujrati:** Galac, Garo
- **Hindi:** Giloya, Gurcha
- **Kannada:** Amritaballi
- **Kashmiri:** Amrita, Gilo
- **Malayalam:** Chittamritu
- **Marathi:** Gulvel
- **Oriya:** Guluchi
- **Punjabi:** Gilo
- **Tamil:** Seendal, Seendil kodi
- **Telugu:** Thippateega
- **Urdu:** Gilo

DESCRIPTION

A. Macroscopic: The drug occurs in pieces of varying thickness, ranging from 0.6 to 5 cm in diameter. Young stems are green with smooth surfaces and swellings at the nodes, while older stems have a light brown surface marked with warty protuberances due to circular lenticels. When cut transversely, the surface shows a radial structure with conspicuous medullary rays traversing porous tissues. The taste is bitter.

B. Microscopic: The transverse section of the stem shows the outermost layer of cork, differentiating into an outer zone of thick-walled, brownish, and compressed cells, and an inner zone of thin-walled, colorless, tangentially arranged cells in 3-4 rows. This is followed by five or more rows of secondary cortex cells, with the outer rows being smaller than the inner ones. Just within the opening of lenticels, groups of sclereids consisting of 2-10 cells are found in the secondary cortex region. The outer zone of the cortex consists of 3-5 rows of irregularly arranged, tangentially elongated chlorenchyma cells. Cortical cells situated towards the inner side are polygonal in shape and filled with plenty of starch grains, which can be simple, ovoid, irregularly ovoid-elliptical, or occasionally compound with 2-4 components. Several secretory cells are scattered in the cortex. Pericyclic fibers are lignified, with a wide lumen and pointed ends, and are associated with many crystal fibers containing a single prism in each chamber.

The vascular zone is composed of 10-12 or more wedge-shaped strips of xylem, externally surrounded by semi-circular strips of phloem, alternating with wide medullary rays. The phloem consists of sieve tubes, companion cells, and phloem parenchyma of polygonal or tangentially elongated cells, some of which contain crystals of calcium oxalate. The cambium is composed of one to two layers of tangentially elongated cells in each vascular bundle. The xylem consists of vessels, tracheids, parenchyma, and fibers. In the primary xylem, the vessels are comparatively narrow and devoid of tyloses, while secondary xylem elements are thick-walled and lignified. The vessels are cylindrical in shape, bearing bordered pits on their walls. Medullary rays are 15-20 or more cells wide, containing rounded, hemispherical, oblong, or ovoid starch grains with faintly marked concentric striations and a central hilum appearing like a point. These starch grains measure 5.5-11.20 µm in diameter and 6-11.28 µm in length.

The pith is composed of large, thin-walled cells mostly containing starch grains.

IDENTITY, PURITY, AND STRENGTH

A. Dried drug:

1. **Total ash:** Not more than 2 percent (Appendix 2.2.3).
2. **Foreign matter:** Nil (Appendix 2.2.2).
3. **Acid-insoluble ash:** Not more than 1 percent (Appendix 2.2.4).
4. **Acid-insoluble ash:** Not more than 3 percent (Appendix 2.2.6).
5. **Alcohol-soluble extractive:** Not less than 3 percent (Appendix 2.2.7).
6. **Water-soluble extractive:** Not less than 11 percent (Appendix).

B. For fresh drug:

1. **Foreign matter:** Nil (Appendix 2.2.2).
2. **Moisture content:** 75 percent (Appendix 2.2.9).

Constituents : Terpenoids and alkaloids.

❖ **Properties and Action**

- **Rasa:** Tikta, Kashaya
- **Guna:** Laghu
- **Virya:** Ushna
- **Vipaka:** Madhura
- **Karma:** Tridoshamaka, Samgrahi, Balya, Dipana, Rasayana, Raktarodhaka, Jvaraghna.

❖ **Important Formulations :** Amrtarista, Amritottara Kvatha Churna, Guduchi Taila, Guduchiayadi Churna, Guduchi Sattva, Chinnodbhavadi Kvatha Churna.

❖ **Therapeutic Uses :** Kushtha, Vatarakta, Jvara, Kamala, Pandu, Prameha.

Dose:

1. 3-6 gms of the drug in powder form.
2. 20-30 ml of the drug for decoction.

2.1.A GUDUCHI SVARASA

Reference: Sha.Sam.Ma. Kh. Chp1/7 page 138

स यथा—अमृताया रसः क्षौद्रयुक्तः सर्वप्रमेहजित्।

(Sha. S.M.Kh. 1/7)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Guduchi	St.	1 Part

Procedure:

1. Choose high-quality dried Guduchi stems that are free from mold, insects, and other impurities.
2. Rinse the dried stems quickly under running water to remove any surface dust and impurities.
3. Soak the one part of Guduchi stems in four parts of water overnight. This will help to rehydrate the stems and make them easier to process.
4. After soaking, chop the rehydrated stems into small pieces to facilitate easier grinding and extraction of juice.
5. Crush the chopped pieces using a mortar and pestle to make a coarse paste (Kalka).
6. Pour the Crushed Guduchi into a clean muslin cloth or a fine strainer.
7. Squeeze the muslin cloth or use the strainer to extract the juice. Ensure that all the liquid is extracted by pressing thoroughly.
8. Filter the juice again through a fine sieve or muslin cloth to ensure there are no residues left in the juice.
9. Collect the filtered juice in a clean, dry container.

Anupana: Honey

Indication: All types of Prameha

PHARMACODYNAMICS

1. Guduchi Svarasa has Rasayana (rejuvenating) properties.
2. Regulates blood sugar levels, improves pancreatic function, and enhances insulin sensitivity; beneficial for diabetes (Prameha) management.
3. Boosts immunity, scavenges free radicals, and reduces oxidative stress to prevent diabetic complications.

PHARMACOKINETICS

1. Active compounds are absorbed, distributed, and interact with cellular receptors after oral intake.
2. Administered with honey for improved taste and efficacy.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Efficacy of Guduchi Svarasa (Bhavaprakasa) in the Management of Madhumeha	Prakash Mane, Professor, Rognidan Department, D.Y. Patil Vidyapeeth's Dr. D.Y. Patil College of Ayurved and Research Centre, Pimpri, Pune, MHA, India.	In this study, 25 patients with classical Madhumeha symptoms were selected, regardless of sex or occupation. Evaluation based on Rogabala, Dehabala, Chetasabala, and Agnibala, using specific scoring, underwent statistical analysis via a Paired t-test. Guduchi Svarasa showed significant efficacy in alleviating Madhumeha symptoms, particularly in post-meal blood sugar levels.

Sr.No.	Article Name	Author Name	Result
2.	Therapeutic efficacy of Guduchi w.s.r to Madhyama Khanda of Sharngadhara Samhita	Sumedh Sanjay Joshi, Post Graduate Scholar, Department of Dravyaguna, All India Institute of Ayurveda, New Delhi, India.	Sharngadhara has listed 46 formulations containing Guduchi as an ingredient. Only 3 of these formulations (Amrita Ghrita, Guduchi Hima, and Amrita Svarasa) feature Guduchi as the sole drug and are indicated for managing Prameha, Kushtha, and Jvara. Otherwise, Guduchi is included in various formulations meant for diverse pathologies.

2.1.B GUDUCHYADI CHURNA

Reference: B.R., Plihayakrita Rogadhikara

गुडूच्यतिविषा शुण्ठी भूनिम्बयवतिक्तकम्।
मुस्ता कणा यवक्षारः कासीसं भ्रमरातिथिः।।
एतेषां समभागेन चूर्णमेव विनिक्षिपेत्।
यकृत्प्लीहपाण्डुरोगमग्निमान्द्यमरोचकम्।।
ज्वरमष्टविधं हन्ति साध्यासाध्यमथापि वा।
नानादोषोद्भवञ्चैव वारिदोषभवं तथा।
विरुद्धभेषजभवं ज्वरमाशु व्यपोहति।।

(B.R., Plihayakrita, Rogadhikara, 41/12-14)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Guduchi	St.	1 Part
Ativisha	Rt.	1 Part
Shunthi	Rz.	1 Part
Chirayata	Pl.	1 Part
Kalamegha	Pl.	1 Part
Nagarmotha	Dr. Rz.	1 Part
Pippali	Fr.	1 Part
Yavakshara	—	1 Part
Shudha Kashisha	—	1 Part
Champaka	Bk.	1 Part

Procedure:

1. Gather all the required dried ingredients for Guduchyadi Churna. Ensure each ingredient is clean and free from impurities.
2. Using a Khalva Yantra (traditional mortar and pestle) or a grinder, grind each ingredient separately into a fine powder.
3. Filter each powdered ingredient through a clean cloth to remove any coarse particles.
4. Combine all the filtered powders together in a clean, dry container. Mix thoroughly to ensure a uniform blend of all ingredients.
5. Filter the compound powder mixture once again through a clean cloth to ensure a fine consistency.
6. Store the final compound powder in sterilized, airtight glass containers to preserve its potency and freshness.
7. Label the containers with the name Guduchyadi Churna and the preparation date.

Dose: 3 gms
Anupana: Cold Water
Odour: Odourless
Colour: Harida Varna
Taste: Tikta
Indications: Yakritpliha roga and all types of fever.

PHARMACODYNAMICS

1. Guduchi, Ativisha, and Chirayata have antipyretic properties, modulating temperature regulation to reduce fever.
2. Shunthi and Pippali aid digestion and enhance bioavailability of active compounds.
3. Nagaramotha and Yavakshara alleviate liver and spleen disorders, improving liver function and hemoglobin levels.

PHARMACOKINETICS

1. Administered orally as a powder mixed with cold water for rapid gastrointestinal absorption.
2. Metabolized in the liver, targeting the liver, spleen, and digestive system.
3. Dosage of 3 grams ensures optimal therapeutic effects with minimal adverse reactions.
4. Characteristic yellowish color and bitter taste indicate bioactive compounds.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Efficacy of Guduchyadi Churna in Anxiety Disorder	Prof. Dr. Mrs. Sunanda R. Pedheka, BAMS, M.D., Ph.D. Kayachikitsa, Professor, Department of Kayachikitsa, Faculty of Ayurved, I. M. S. Banaras Hindu University, Varanasi, U. P.	In a clinical study, 40 patients with Anxiety disorder were randomly assigned to two groups. Group A, treated with Guduchyadi Churna, demonstrated more effective results compared to Group B, which received Yashtimadhu Churna, over a 4-week period. Guduchyadi Churna proved to be an effective management option for Chittodvega (Anxiety disorder), with no observed adverse effects.

Sr.No.	Article Name	Author Name	Result
2.	Role of Guduchyadi Churna as an Internal Intervention in the Management of Pandu Roga with Special Reference to Anaemia—A Single Case Report	Tarannum Khan, PG Scholar, PG Dept. of Kayachikitsa, DMM Ayurved College, Yavatmal, Maharashtra, India.	In this case study, Guduchyadi churna was orally administered twice daily for 45 days after meals with lukewarm water. The follow-up on the 45th day revealed that targeting the rasavaha srotas with this treatment not only improved Haemoglobin concentration but also alleviated symptoms associated with Pandu roga.

2.1.c Guduchi Kvatha

Reference: B.R., Jvaradhikara

1. गुडूची निम्बधन्याकं पद्मकं रक्तचन्दनम्।
एष सर्वज्वरान् हन्ति गुडूच्यादिस्तु दीपनः।
हल्लासारोचकच्छर्दिपिपासादाहनाशनः।। (B.R., Jvaradhikara, 6/62)

Ingredients Used

Drug Name	Part Used	Proportion
Guduchi	St.	1 Part
Nimba	Bk.	1 Part
Dhaniya	Sd.	1 Part
Padmaka	Bk.	1 Part
Rakta Chandana	Bk.	1 Part
Water for Decoction	—	16 times
Reduced to	—	1/16 part

Procedure:

1. Obtain the necessary all the required for Guduchi Kvatha. Ensure each ingredient is dried and cleaned properly.
2. Grind each ingredient separately into a coarse powder.
3. Mix all the coarse powders properly in a clean, dry container.
4. Add sixteen times the amount of water to the mixture of coarse powders.
5. Allow the mixture to soak in the water overnight.
6. The next morning, subject the mixture to mild heat. Continue heating until the liquid reduces to 1/16th of its original quantity.
7. Once reduced, filter the mixture through a clean cloth to remove the solid residues.
8. Collect the filtrate in a clean container. This filtrate is known as Guduchi Kvatha.

Dose: 50 ml.

Indications: All types of jvara, Aruchi, Vamana, Pipasa and Daha.

2. गुडूचीसारिवाद्राक्षाशतपुष्पापुनर्नवाः।
सगुडोऽयं कषायः स्याद्वातज्वरविनाशनः।। (B.R., Jvara., 6/76)

Ingredients Used

Drug Name	Part Used	Proportion
Guduchi	St.	1 Part
Sariva	Rt.	1 Part
Draksha	Fr.	1 Part
Shatapushpa	Fr.	1 Part
Punarnava	Pl.	1 Part
Water for Decoction	—	16 times
Reduced to	—	1/16th part

Dose: 50 ml, Twice a day.

Indications: Vataja jvara.

3. गुडूची शतपुष्पा च द्राक्षा रास्ना पुनर्नवा।
त्रायमाणा कषायश्च गुडैर्वातज्वरापहः।। (B.R., Jvara., 6/88)

Ingredients Used

Drug Name	Part Used	Proportion
Guduchi	St.	1 Part
Sauf	Fr.	1 Part
Draksha	Fr.	1 Part
Rasana	Lf.	1 Part
Punarnava	Pl.	1 Part
Trayamana	Rz.	1 Part
Water for Decoction	—	16 times
Reduced to	—	1/16th Part

Dose: 50 ml, Twice a day.

Indications: Vataja jvara.

4. गुडूची भूमिनिम्बश्च बालं वीरणमूलकम्।
लघु मुस्तं त्रिवृद्धात्री द्राक्षा वासा च पर्पटः।।
एषां क्वाथो हरत्येव ज्वरं पित्तभवं द्रुतम्।
सोपद्रवमपि प्रातर्निपीता मधुना सह।। (B.R., Jvara., 6/99-100)

Ingredients Used

Drug Name	Part Used	Proportion
Guduchi	St.	1 Part
Chirayata	Pl.	1 Part
Sugandhabala	Rt.	1 Part
Khasa	Sd.	1 Part
Musta	Rz.	1 Part
Nishota	Rt.	1 Part
Amala	Fr.	1 Part
Draksha	Fr.	1 Part
Vasa	Lf.	1 Part
Parpat	Rt.	1 Part
Water for Decoction	—	16 times
Reduced to	—	1/16th Part

Dose: 50 ml.

Anupana: Honey.

Indications: Pittaja jvara.

5. गुडूच्यामलकैर्युक्तः केवलो वाऽपि पर्पटः।
पित्तज्वरं हरेत्तूर्णं दाहशोषभ्रमान्वितम्।। (B.R., Jvara., 6/122)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Guduchi	St.	1 Part
Amalaka	Fr.	1 Part
Parpata	Rt.	1 Part
Water for Decoction	—	16 Parts
Reduced to	—	1/16th Part

Dose: 50 ml.

Indications: Pittaja jvara, Daha, Trishna.

6. गुडूची चन्दनं पद्मं नागरेन्द्रयवासकम्।
अभयाऽऽरग्वधोदीच्यपाठाधान्याब्दरोहिणी।।
कषायं पाययेदेतत् पिप्पलीचूर्णसंयुतम्।
कासश्वासज्वरान् हन्ति पिपासादाहनाशनः।
विण्मूत्रानिलविष्टम्भे त्रिदोषप्रभवेऽपि च।।
(B.R., Jvara., 6/153-154)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Guduchi	St.	1 Part
Rakta Chandan	Bk.	1 Part
Padmaka	Hd. Wd.	1 Part
Shunthi	Rz.	1 Part
Indrayava	Sd.	1 Part
Yavasa	Sd.	1 Part
Haritaki	P.	1 Part
Amalatasa	St. Bk.	1 Part
Sugandhabala	Rt.	1 Part
Pata	Rt.	1 Part
Dhaniya	Fr.	1 Part
Nagarmotha	Dr. Rz.	1 Part
Katuki	Rz.	1 Part
Water for Decoction	—	16 Parts
Reduced to	—	1/16th Part

Dose: 50 ml.

Indications: Sannipattaja Jvara, Kasa, Shvasa, Daha, Trishna.

7. गुडूचिकानिम्बकवासकञ्च शटी किरातं मगधाबृहत्यौ।
दार्वी पटोलं क्वथितः कषायः पिबेन्नरः पित्तकफज्वरे च।।
(B.R., Jvara., 6/180)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Guduchi	St.	1 Part
Nimba	Bk.	1 Part
Vasa	Lf.	1 Part
Shati	Rt.	1 Part
Chirayata	Pl.	1 Part
Pippali	Fr.	1 Part
Brihati	Rt.	1 Part
Daruharidra	Bk.	1 Part
Patola	Lf.	1 Part
Water for Decoction	—	16 Parts
Reduced to	—	1/16th Part

Dose: 50 ml.

Indications: Pittakaphaja jvara, Kasa.

8. गुडूचीमुस्तभूनिम्बं धात्री क्षुद्रा च नागरम्।
बिल्वादिपञ्चमूलञ्च कटुकेन्द्रयवासकम्।। (B.R., Jvara., 6/431)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Guduchi	St.	1 Part
Musta	Dr. Rz.	1 Part
Chirayata	Pl.	1 Part
Amala	P.	1 Part
Kantkari	Pl.	1 Part
Shunthi	Rz.	1 Part
Bilva	Bk.	1 Part
Gambhara	Rt.	1 Part
Sonapatha	Rt.	1 Part
Aarni	Rt.	1 Part
Paphala	Rt.	1 Part
Katuki	Dr. Rz	1 Part
Indrayava	Sd.	1 Part
Yavasa	Pl.	1 Part
Water for Decoction	—	16 Parts
Reduced to	—	1/16th Part

Dose: 50 ml.

Indications: All types of fever.

PHARMACODYNAMICS

1. **Guduchi**: Known for its immunomodulatory, anti-inflammatory, and antipyretic properties. It enhances the body's resistance to infections and reduces fever by modulating immune responses.
2. **Musta**: Possesses anti-inflammatory and antipyretic properties. It helps in reducing fever and alleviating pain associated with fever.
3. **Chirayata**: Known for its bitter principles which have antipyretic and anti-inflammatory effects. It helps in reducing fever and detoxifying the body.
4. **Amala**: Rich in vitamin C, it acts as an antioxidant and immune booster. It helps in reducing fever and improves overall health.
5. **Kantkari**: Has expectorant and antipyretic properties. It is used to treat respiratory conditions associated with fever.

6. **Shunthi**: Known for its anti-inflammatory and antipyretic properties. It helps in reducing fever and relieving symptoms such as body aches.
7. **Bilva**: Has antimicrobial and antipyretic properties. It helps in reducing fever and digestive issues.
8. **Gambhari**: Possesses antipyretic and anti-inflammatory properties. It is effective in reducing fever and inflammation.
9. **Syonaka**: Known for its anti-inflammatory and antipyretic properties. It helps in reducing fever and relieving pain.
10. **Arni**: Has antipyretic and anti-inflammatory properties. It helps in reducing fever and improving respiratory health.
11. **Paphala**: Known for its antipyretic properties. It helps in reducing fever and alleviating associated symptoms.
12. **Katuki**: Possesses strong antipyretic and hepatoprotective properties. It helps in reducing fever and protecting the liver.
13. **Indrayava**: Known for its antipyretic and antimicrobial properties. It helps in reducing fever and treating infections.
14. **Yavas**: Has antipyretic and anti-inflammatory properties. It helps in reducing fever and alleviating symptoms of respiratory and digestive disorders.

PHARMACOKINETICS

1. **Absorption**: Taken orally as a decoction; active ingredients extracted into water are absorbed through the gastrointestinal tract.
2. **Distribution**: Active compounds are distributed via the bloodstream, targeting the immune, respiratory, and digestive systems.
3. **Metabolism**: Primarily metabolized in the liver; some components undergo biotransformation to active or inactive forms.
4. **Excretion**: Metabolites excreted via the kidneys (urine) and the gastrointestinal tract (feces); decoction aids in waste elimination.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Therapeutic use of Guduchyadi Kashaya— A Review Article	Manisha Amitkumar Jagtap, Lecturer in Kaumarbhritya Dept. in Sumatibhai Shah Ayurved Mahavidhyala, Hadapsar.	This review article aims to explore the therapeutic applications of Guduchyadi kashaya and analyze the diverse pharmacological properties and therapeutic uses of its constituent drugs. It primarily focuses on identifying the key properties of individual drugs and their potential impacts on disease pathogenesis.
2.	Pharmcological Potential of Guduchyadi Kvatham in Combating Covid-19	Ansary. P.Y., Professor & HOD, Department of Dravyaguna vijnanam, Government Ayurveda College, Tripunithura, Kerala.	The study highlights Guduchyadi kvatham's effectiveness for treating Pitta and Kapha imbalances, particularly in fever cases. Its ingredients benefit various bodily systems. Pharmacological activities like anti-inflammatory, antipyretic, antiviral, antibacterial, and anti-allergic properties endorse its efficacy against viral diseases, making it a valuable treatment option for fever and related symptoms.
3.	A Clinical Study To Evaluate the Efficacy of Guduchyadi Kwath in the Management of Diabetic Polyneuropathy	Rehana Parveen, PG Scholar, Department of Kaya Chikitsa, Government Ayurvedic College and Hospital, Guwahati, Assam, India	Sixty patients aged 20-70 with Diabetic Polyneuropathy were randomly divided into two groups. Group A received Guduchyadi Kwath, 40ml twice daily after meals, while Group B received Tab Methylcobalamine (500 mcg) + Gabapentin (300 mg), 1 tablet daily for 90 days with 6 follow-ups. Results show that Guduchyadi kvatha is equally effective as the control drug in treating DPN, except for neuropathic pain where the control drug showed superiority over Guduchyadi kvatha.
4.	Efficacy of Guduchyadi Kvatha yoni Prakshalana on Upapluta Yonivyapada – A Case Report	Dr. Kowsalya R.G., PG Scholar, Sri Kalabyreshwara Swamy Ayurvedic Medical College and Hospital, Research Centre, Vijayanagar, Bangalore-560104, Karnataka	From this case study, Guduchyadi Kvatha yoni prakshalana has proven effective in treating upapluta yonivyapad due to its Tridosha Nashaka (balancing of the three doshas), Sravahara (promoting discharge), Kanduhara (relieving itching), Shothahara (anti-inflammatory), Dahaprashamana (alleviating burning sensation), Vranashodana (cleansing wounds), Krimighana (anti-parasitic), immunomodulatory, antimicrobial, and anti-inflammatory properties.

2.1.D GUDUCHI HIMA

Reference: B.R., Chhardi Rogadhikara

कृतं गुडूच्या विधिवत् कषायं हिमसंज्ञितम्।
तिसृष्वपि भवेत्यथ्यं माक्षिकेण समायुतम्।।
(B.R., Chhardi Rogadhikara, 19/16)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Guduchi	St.	1 Part
Water	–	6 Parts

Procedure:

1. Obtain dried Guduchi (Giloy) stems and ensure they are clean and free from impurities.
2. Using a Khalva Yantra, grind the Guduchi stems into a coarse powder (Yavakuta Churna).
3. Collect the coarse powder into a clean earthen pot.
4. Add 6 parts of cold water to the earthen pot containing the Guduchi coarse powder. Ensure the amount of water is sufficient to cover the powder completely.
5. Allow the mixture to soak overnight, exposing it to moon rays for additional cooling and enhancing properties.
6. The next morning, rub the soaked mixture with your hands to ensure thorough extraction of the medicinal properties.
7. Filter the mixture through a clean cloth to remove the solid residues.
8. Collect the filtered liquid in a clean container. This liquid is known as Guduchi Hima Kalpana.

Anupana: Madhu.

Indication: Types of Vamana Nasta.

PHARMACODYNAMICS

1. **Alkaloids**: Cold extraction preserves the alkaloids like berberine, choline, and palmatine, which have immune-modulatory and anti-inflammatory effects.
2. **Glycosides**: Cold extraction retains glycosides, such as tinosporide and cordifolioside, known for their adaptogenic and antioxidant properties.
3. **Steroids and Polysaccharides**: These compounds are important for their role in enhancing immune response and exhibiting anti-diabetic effects.

MECHANISM OF ACTION

1. **Immunomodulation**: Guduchi is known to modulate the immune system by enhancing the function of macrophages, activating the production of antibodies, and increasing resistance to infections. The cold extraction process preserves these immunomodulatory constituents, allowing them to function effectively.
2. **Anti-inflammatory**: The preserved alkaloids and glycosides exhibit anti-inflammatory effects by inhibiting the release of pro-inflammatory cytokines.
3. **Antioxidant**: Guduchi contains antioxidants that scavenge free radicals and protect against oxidative stress. Cold extraction helps in retaining these antioxidants, enhancing the herb's efficacy in reducing oxidative damage.
4. **Hypoglycemic Effect**: The cold extraction method retains compounds that help in regulating blood glucose levels by promoting insulin secretion and improving glucose utilization.

PHARMACOKINETICS

1. **Absorption:** Administered orally as a kashaya (decoction); active compounds are efficiently extracted into the water and absorbed through the gastrointestinal tract.
2. **Distribution**: Active ingredients are distributed via the bloodstream, targeting various systems including the digestive, thermoregulatory, and cardiovascular systems to exert their therapeutic effects.
3. **Metabolism**: Primarily metabolized in the liver, where components may undergo biotransformation into more active or inactive forms.
4. **Excretion**: Metabolites are excreted through the kidneys (urine) and the gastrointestinal tract (feces), ensuring effective elimination of waste products.

RESEARCH UPDATES : No Data Found.

2.1.E GUDUCHI GHANA — SAMSHAMANI VATI

Reference:

- AFI, Part II, Page 183.
- Siddhayoga Sangraha- Jvara Rogadhikara

INGREDIENTS USED

Drug Name	Part Used	Proportion
Guduchi	St.	1 Part
Jala	—	4 Parts
Reduce to	—	1 Part

Procedure:

1. Obtain fresh or dried Guduci (Giloy) stems and ensure they are clean and free from impurities.
2. Grind the Guduci stems into a coarse powder using a grinder or Khalva Yantra.
3. Place the Kvatha Churna into a vessel. Add four times the amount of water to the vessel and let the mixture soak overnight.
4. The next morning, heat the soaked mixture over a low flame (mandagni) until the total quantity reduces to 1/4th of the original volume. This is now the Kvatha (decoction).

5. Filter the Kvatha through a clean cloth to remove solid residues.
6. Transfer the filtered Kvatha into a stainless steel vessel. Heat the Kvatha over a low flame (mandagni) until it becomes a concentrated form suitable for making tablets or pills, then roll it into tablets or pills.
7. Expose the tray to sunlight or under hot air oven for several hours to days until the material is completely dry.
8. Once fully dried, collect the dried material. This final product is called Guduchi Ghana.
9. Store the Guduchi Ghana in a clean, dry, airtight container to preserve its potency and freshness.

Dose: 250-500 mg

Therapeutic Indication: Jvara, Jirna jvara, Rajayakshma, Pandu, Vishamajvara.

PHARMACODYNAMICS

1. Guduchi Ghana (Samshamani Vati)- is a concentrated form of Tinospora cordifolia, renowned for its immunomodulatory and antipyretic properties.
2. The potent bioactive compounds in Guduchi stimulate the production and activity of white blood cells, enhancing the body's immune response to infections and fevers.
3. It acts on the hypothalamus, regulating body temperature and exerting antipyretic effects, thereby reducing fever.
4. Guduchi's anti-inflammatory properties help alleviate symptoms associated with fever, such as headache, body ache, and malaise.
5. The formulation's efficacy against various types of fever, including chronic and intermittent fevers, showcases its versatility in managing different pathological conditions.
6. It also aids in the management of conditions like anaemia (Pandu) and general debility (Jirna jvara), enhancing overall health and vitality.

PHARMACOKINETICS

1. **Absorption**: Taken orally, Guduchi Ghana (Samshamani Vati) is absorbed through the gastrointestinal tract, allowing its bioactive compounds to enter the bloodstream.
2. **Distribution**: Once absorbed, the active compounds are distributed throughout the body, particularly targeting the immune system and the hypothalamus to exert their therapeutic effects.
3. **Metabolism**: The compounds in Guduchi Ghana are metabolized primarily in the liver, where they may be transformed into more active or inactive forms, facilitating their therapeutic actions.
4. **Excretion**: The metabolites are excreted via the kidneys (urine) and the gastrointestinal tract (feces), ensuring the elimination of waste products from the body.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	A Physicochemical Standardization of Guduchi Ghana Vati W.S.R. To Time of Collection of Guduchi	Dayanand Tanvi, PG Scholar, Dept. of PG Studies in Rasashastra and Bhaishajya Kalpana Muniyal Institute of Ayurveda Medical Sciences, Manipal-576104, Karnataka	Guduchi was harvested in Grishma Ritu, Varsha Ritu, and Sharad Ritu. Guduchi Ghana Vati, prepared following the classical method in Siddhayoga Sangraha, revealed the presence of aldehydes, ketones, carbonyl groups, OH groups, and cyclic ring stretching. Quantitative starch yields were 3.15%, 2.97% and 2.09% in Sharad Ritu, Varsha Ritu and Grishma Ritu, respectively. Starch percentages were 30.20%, 18.86%, and 14.27% in Sharad Ritu, Varsha Ritu, and Grishma Ritu. Alkaloid content varied with 9.09% in Grishma Ritu, 4.25% in Varsha Ritu, and 1.643% in Sharad Ritu. Pharmaceutically, Sharad Ritu exhibited the best yield with a higher starch content, while Grishma Ritu showed a higher alkaloid content.
2.	Comparative Analysis of Samsamani Vati / Guduchi ghana Vati of Competitive Ayurveda, Pharmaceuticals of India	Ashok Kumar Panda, Senior Research Officer, Central Ayurveda Research Institute, Bhubaneswar, Orissa	Tinosporide is significantly present in Patanjali, Zandu, and IMPCL products, with trace amounts in Dabur and none detected in the Baidyanath sample. The bitter principle is more prominent in Zandu and Baidyanath products. IMPCL products exceed permissible limits for heavy metals (Lead and Mercury). Studied products are free from Arsenic, Cadmium, pathogens, and Aflatoxins. There is a lack of uniformity in Samshamani Vati/Guduchi Ghana Vati among Indian brands. Maintaining consistency in Ayurveda pharmaceuticals for bioactive molecules is recommended for both efficacy and safety.

Sr.No.	Article Name	Author Name	Result
3.	A Retrospective Study on Efficacy and Safety of Guduchi Ghana Vati for Covid-19 Asymptomatic Patients	Abhimanyu Kumar, Vice Chancellor, Dr. Sarvepalli Radhakrishnan Rajasthan Ayurved University, Kadwad, Nagaur, Highway Road, Jodhpur, Rajasthan-342037, India	Ninety-one asymptomatic COVID-19 patients, comprising 40 individuals receiving Guduchi Ghana Vati and 51 under standard care, were included in this study. The median age was 46 years (range 19–72). Samples were exclusively collected from COVID care centers admitting asymptomatic to mild-to-moderate cases. Pregnant, post-natal, or lactating mothers with COVID exposure or confirmation were admitted to a separate hospital.

2.1.F GUDUCHI SATTVA

Reference: AFI, Part I, Page 205

गुडूचीं खण्डशः कृत्वा कुट्टयित्वा सुमर्दयेत्।
वस्त्रेण विधृतं तोयं स्रावयेत्तच्छनैः शनैः।।
शुद्धशङ्खनिभं चूर्णमेतैः संमिश्रयेद्भिषक्।

(Y.R. Raja, 1-1½)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Guduchi	St.	1 Part
Water	–	21 Parts

Procedure:

1. The guduchi stem is cut into small pieces, macerated in water, and left to soak overnight.
2. The mixture is then strained through a cloth, allowing the solid matter to settle.
3. The supernatant liquid is decanted, and the sediment is washed by adding water and decanting it 21 times.
4. The resulting sediment (Sattva) is then dried and powdered.
5. Store the Guduchi Sattva in a clean, dry, airtight container to preserve its potency and freshness.

Dose: 1 gm.

Anupana: Honey.

Therapeutic Indications: Raktapitta, Kashaya, Padadaha.

PHARMACODYNAMICS

1. **Immunomodulatory Effect**: Guduchi (Tinospora cordifolia) contains active constituents like tinosporin, tinosporide, and cordifolioside. These compounds enhance the activity of macrophages, increase leukocyte count, and stimulate the production of cytokines, thereby modulating the immune response.
2. **Anti-inflammatory and Antipyretic Effect**: The plant's constituents, such as alkaloids and glycosides, inhibit the synthesis of pro-inflammatory cytokines and prostaglandins, reducing inflammation and fever.
3. **Hepatoprotective Effect**: Guduchi contains hepatoprotective compounds that enhance liver function and protect against liver damage by scavenging free radicals and promoting the regeneration of liver cells.
4. **Antioxidant Effect**: The presence of antioxidants like flavonoids and polyphenols in Guduchi helps neutralize free radicals, reducing oxidative stress.
5. **Adaptogenic Effect**: Guduchi helps in balancing stress hormones and improves the body's ability to cope with physical and mental stress.

PHARMACOKINETICS

1. **Absorption**: Guduchi Sattva, taken orally, is rapidly absorbed through the gastrointestinal tract. The extraction process used in preparing the Sattva ensures that the active compounds are in a readily absorbable form.
2. **Distribution**: Once absorbed, the active constituents of Guduchi are distributed throughout the body via the bloodstream. They reach various tissues, including the liver, immune cells, and inflamed areas.
3. **Metabolism**: Guduchi's active compounds are primarily metabolized in the liver. The metabolism may involve biotransformation into more active or inactive forms, depending on the compound.
4. **Excretion**: The metabolites of Guduchi are excreted through the kidneys (urine) and, to some extent, through the gastrointestinal tract (feces).

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Quality Control Evaluation of Guduchi Sattva (solid aqueous extract of Tinospora cordifolia (Willd, Miers): An Herbal Formulation	Rohit Sharma, Departments of Rasashastra and Bhaishajya Kalpana, Institute of Post Graduate Teaching and Research in Ayurveda, Gujarat Ayurved University, Jamnagar, Gujarat, India	The study evaluates quality control parameters for Guduchi Sattva using 15 batches, recording an average 3.8% dried Sattva. It contains alkaloids, carbohydrates, and starch, with a total alkaloid content of 0.31%. No heavy metals or microbial load were detected, establishing these observations as a standard for future Sattva studies.
2.	Physicochemical Evaluation of Sattva Extracted From Male and Female Plants of Guduchi (Tinospora cordifolia (Willd., Miers)	Rohit Sharma, Assistant Professor, Department of Rasashastra & Bhaishajya Kalpana, Abhilashi Ayurvedic College & Research Institute, Abhilashi University, Chail Chowk, Mandi-175028, H.P., India	This study aims to assess quantitative variation and physicochemical profiles in Sattva extracted from male and female varieties of Guduchi. Ten batches (5 from each group) of Guduchi Sattva were prepared, and findings were systematically recorded. Results indicate a higher average yield of dried Sattva in the female variety (3.18%) compared to the male variety (2.25%). Extractive values (water and methanol soluble) and total alkaloid content were slightly elevated in the Sattva from the female variety.

2.1.G AMRITADI GUGGULU

Reference: AFI, Part III, Page 107

त्रिप्रस्थममृतायाश्च प्रस्थमेकन्तु गुग्गुलोः।
प्रत्येकं त्रिफलाप्रस्थं वर्षाभूप्रस्थमेव च।।
सर्वमेकत्र सङ्कुट्य साधयेन्नल्वणेऽम्भसि।
पुनः पचेत्पादशेषं यावत्सान्द्रत्वमागतम्।।
दन्तीचित्रकमूलानां कणाविश्व फलत्रिकम्।
गुडूचीत्वग्विडङ्गानां प्रत्येकार्द्धपलं मतम्।।
त्रिवृताकर्षमेकन्तु सर्वमेकत्र चूर्णयेत्।
सिद्धे चोष्णे क्षिपेत्तत्र अमृतागुग्गुलुं परम्।।
अतो यथाबलं खादेदम्लपित्ती विशेषतः।
वातरक्तं तथा कुष्ठं गुदजान्यग्निसादनम्।।
दुष्टव्रणं प्रमेहांश्च आमवातं भगन्दरम्।
नाड्याढ्यवातं श्वयथुं हन्यात्सर्वामयांस्तथा।।
अश्विभ्यां निर्मितश्चायममृताऽऽख्यो हि गुग्गुलुः।।
गुडरामठशुण्ठीनां मास कूष्माण्डयोरपि।
गुडूच्या गुग्गुलोश्चैव प्रस्थः षोडशाभिः पलैः।।

(Bh.P. Chiki., 29/183-190)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Guduchi	St.	2.304 kg
Shuddha Guggulu	Exd.	768 gms
Haritaki	P.	768 gms
Bibhitaki	P.	768 gms
Amalaki	P.	768 gms
Varshabhu	Rt.	768 gms
Water for Decoction	—	12.288 L
Reduced upto	—	3.072 L
Danti	Rt.	24 gms
Chitraka	Rt.	24 gms
Pippali	Fr.	24 gms
Shunthi	Rz.	24 gms
Haritaki	P.	8 gms
Bibhitaki	P.	8 gms
Amalaki	P.	8 gms
Guduchi	St.	24 gms
Tvak	St. Bk.	24 gms
Vidanga	Fr.	24 gms
Trivrita	Rt.	12 gms

Procedure:

1. Take the required quantity of Triphala (Haritaki, Bibhitaki and Amalaki). Add required quantity of water to the Triphala and Boil the mixture until it is reduced to 1/4th of its original volume.
2. Filter the Triphala Kvatha to remove solid residue.
3. Add the required amount of Guda to the filtered Triphala Kvatha and Boil the mixture again until it reaches a thick consistency (Guda Paka).
4. Add all the remaining drugs to the thickened mixture and mix thoroughly to form a homogeneous mass.
5. Shape the mixture into a large bolus. Smear a clean utensil with ghee to prevent sticking and place the bolus in the greased utensil.
6. Roll the bolus into small, uniform pills.
7. Allow the pills to dry properly and store the dried pills in a sterilized, airtight container.

Dose: 250-500 mg.

Indication: Amalpitta, Kushtha, Arsha, Agnimandya, Dushta vrana, Vatarakhta, Bagandara, Prameha, Nadi Vrana, Amavata.

PHARMACODYNAMICS

1. **Anti-inflammatory and Analgesic Effects**: Sudha Guggulu, Guduchi, Haritaki, Bibhitaki, Amalaki, Chitraka, Danti inhibit pro-inflammatory cytokines and COX-2 enzyme, reducing inflammation and pain.
2. **Digestive and Carminative Effects**: Pippali, Sunthi, Vidanga, Trivrta stimulate digestive enzymes, enhance gut motility, and reduce gas formation.
3. **Detoxifying and Antimicrobial Effects**: Haritaki, Bibhitaki, Amalaki, Varshabhu have astringent and antimicrobial properties, aiding detoxification and infection protection.
4. **Hepatoprotective and Antioxidant Effects**: Guduchi, Haritaki, Amalaki enhance liver function, protect liver cells, and reduce oxidative stress.
5. **Immunomodulatory Effects**: Guduchi, Sudha Guggulu enhance both cellular and humoral immunity.

PHARMACOKINETICS

1. **Absorption**: The bioactive compounds in Amritadi Guggulu are absorbed through the gastrointestinal tract. The use of honey as an adjuvant (Anupana) enhances the absorption of these compounds.
2. **Distribution**: Once absorbed, the active constituents are distributed throughout the body via the bloodstream. They are known to cross various biological membranes and reach target tissues, such as joints, skin, liver, and the immune system.
3. **Metabolism**: The active compounds are primarily metabolized in the liver. The metabolism involves biotransformation into more active or inactive forms, depending on the specific compound.
4. **Excretion**: The metabolites of the compounds in Amrutadi Guggulu are excreted through the kidneys (urine) and, to some extent, through the gastrointestinal tract (feces).

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	A pharmaceutico-Analytical Study of Amritadya Guggulu	Swati Sharma, Assistant Professor, Shiva Ayurvedic Medical College & Hospital, Chandpur, Dist. Bilaspur, HP, India	A standard operating procedure was developed for preparing the genuine drug and analyzing its safety and purity. A 50% weight loss occurred, mainly due to impurity removal from the Guggulu and handling. Low acid insoluble ash (1.08%) indicated minimal dirt and sand particles. Low moisture content (6.2% loss on drying) improved shelf life and therapeutic value. Overall, pharmaceutical and analytical studies confirmed the drug's authenticity and quality.
2.	Mode of action of "Amritadya Guggulu" in the Management of Sthoulya W.S.R. to Obesity.	Triveni Raina, PG Scholar, Dept. of Rog Nidan, RGGPG Ayurvedic College, Paprola, HP.	Amritadya Guggulu, with its Rasa-Katu, Tikta, Kashaya, Laghu Guna, Ruksha Virya, Katu Vipaka, and Kapha-Vata Shamaka properties, is effective in managing Sthaulya. Its Rasapanchaka makes it well-suited for Kapha-dominant conditions, breaking the Samprapti of Sthaulya. This study aims to comprehensively explore the mode of action of Amritadya Guggulu in managing Sthaulya, integrating Ayurvedic principles with modern pharmacology.
3.	A Comparative Study to Evaluate the Efficacy of Amritadya Guggulu with Sthaulyahari Peya in the Management of Sthaulya	Kumari Renuka, P.G. Scholar (Ay.) Kayachikitsa, Deptt. of Kayachikitsa, Dr. BNM Rural Ayurvedic Medical College & Hospital, Vijaypur	'n this randomized study, 40 patients from Dr. BNM Rural Ayurvedic College, Vijaypur, were divided into two groups. Group A received Amritadya Guggulu (500 mg), and Group B received Sthaulyahari Peyya for 45 days. Wilcoxon signed-rank and Mann-Whitney U tests were applied during follow-ups. Both groups showed significant improvements in Sthaulya, with Sthaulyahari Peyya proving more effective for Atitrishna, Atikshudha, and daurbalya. Amritadya Guggulu demonstrated superior outcomes for body weight, WHR, and BMI. In conclusion, Sthaulyahari Peyya led to notable inch loss, while Amratadya Guggulu was more effective in reducing actual body weight and BMI.

2.1.H AMRITARISHTA

Reference: AFI, Part I, page 6

अमृतायाः पलशतं दशमूल्यास्तथैव च।
पादावशिष्टं पक्त्वा च चतुर्द्रोणे जले भिषक्।।
गुडस्य त्रितुलाः सिद्धे क्वाथे शीते क्षिपेत्पुनः।
अजाज्याः षोडशपलं द्विपलं रक्तपुष्पकम्।।
सप्तच्छदं तथा व्योषं नागकेशरमब्दकम्।
कट्वीप्रतिविषे वत्सबीजञ्च पलसम्मितम्।।
सर्वमेकीकृतं भाण्डे निदध्यान्मासमात्रकम्।
अमृतारिष्ट इत्येष प्रोक्तो ज्वरकुलान्तकृत्।।

(B.R. Jvara, 6/690-693)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Guduchi	Rt./ St. Bk	4.800 kg
Bilva	Rt./ St. Bk	480 gms
Shyonaka	Rt./ St. Bk	480 gms
Gambhari	Rt./ St. Bk	480 gms
Patala	Rt./ St. Bk	480 gms
Agnimantha	Rt./ St. Bk	480 gms
Shalaparni	Pl.	480 gms
Prishniparni	Pl.	480 gms
Brihati	Pl.	480 gms
Kantakari	Pl.	480 gms
Gokshura	Pl.	480 gms
Water for decoction	—	49.152 L
Reduce upto	—	12.288 L
Guda	—	14.400 kg
Ajaji	Fr.	768 gms
Raktapushpa	Pl.	96 gms
Saptachada	St. Bk.	48 gms
Shunthi	Rz.	48 gms
Maricha	Fr.	48 gms
Pippali	Fr.	48 gms
Nagakeshara	Stmn.	48 gms
Musta	Rz.	48 gms
Katuka	Rz.	48 gms
Ativisha	Rt.	48 gms
Indrayava	Sd.	48 gms

Procedure:

1. Pound the Guduchi stem and prepare a coarse powder of all the remaining dravyas (herbal ingredients).
2. Add water to the pounded Guduchi and other coarse powders and soak the mixture overnight.
3. The next morning, add 50 liters of water to the soaked mixture.
4. Boil the mixture and reduce it to one-fourth of its original volume and filter the kvatha (decoction).
5. Take a Sandhana Patra (fermentation vessel) and smear it with Sarshapa (mustard) oil. Pour the filtered kvatha into the Sandhana Patra.
6. Add melted Guda (jaggery) to the kvatha, along with all the remaining dravyas in the form of Yavakuta Churna (coarse powder).
7. Close the Sandhana Patra with Sandhi-bandhana (sealing the lid) and allow the mixture to ferment properly.
8. Once it attain sandhanalakshana, then filter the final product.
9. Store it in a clean, dry, airtight container. Keep the container in a cool, dark place to preserve the potency.

Dose: 12 to 24 ml.

Therapeutic Uses: All type of Jvara.

PHARMACODYNAMICS

1. **Antipyretic Effect**: Guduchi, Bilva, Shyonaka, Gambhari, Patala. These herbs help reduce fever by modulating the body's thermoregulatory center and reducing the synthesis of pyrogenic cytokines.
2. **Anti-inflammatory and Analgesic Effects**: Shunthi, Maricha, Pippali, Nagakeshara. These ingredients inhibit the production of inflammatory mediators such as prostaglandins and cytokines, reducing inflammation and pain.
3. **Antimicrobial and Antiviral Effects**: Musta, Katuka, Ativisha, Indrayava. These herbs possess broad-spectrum antimicrobial properties, inhibiting the growth of bacteria and viruses.
4. **Immunomodulatory Effects**: Guduchi, Saptachada, Ajaji. These herbs enhance both innate and adaptive immunity by stimulating the production of white blood cells and antibodies.
5. **Digestive and Carminative Effects**: Ajaji, Shunthi, Maricha. These herbs stimulate digestive enzymes, improve gut motility, and reduce gas formation.
6. **Detoxifying and Antioxidant Effects**: Guduchi, Haritaki, Amalaki. These herbs help in detoxifying the body by promoting liver function and scavenging free radicals.

PHARMACOKINETICS

1. **Absorption**: Amritarishta, taken orally, is absorbed through the gastrointestinal tract. The presence of honey and jaggery enhances the bioavailability of the active compounds.
2. **Distribution**: Once absorbed, the active constituents are distributed throughout the body via the bloodstream. They reach various tissues, including the immune system, liver, and inflamed areas.
3. **Metabolism**: The active compounds are primarily metabolized in the liver. The metabolism involves biotransformation into more active or inactive forms, depending on the specific compound.
4. **Excretion**: The metabolites of the compounds in Amritarishta are excreted through the kidneys (urine) and, to some extent, through the gastrointestinal tract (feces).

Sr.No.	Article Name	Author Name	Result
1.	Amritarishta: A Medico Review	Dr. Abhishek Girish Taksale, M.D. 2nd Year (Sch) (Kayachikitsa) R.A. Podar Medical College, Professor (Chikitsa) Worli, Mumbai, MHA	Amritarishta, a polyherbal Ayurvedic liquid, is designed to eliminate various types of fever. With 5-8% self-generated natural alcohol and water, it facilitates absorption in the body. The key ingredient, Amrita (Guduchi), acts as a natural immune booster with significant antipyretic properties.
2.	Antimicrobial Activity of Amritarishta Prepared by Traditional and Modern Methods	Preeti Tiwari, Head of Department of Pharmacognosy, Dr. K. N. Modi Institute of Pharmaceutical Education and Research, Modinagar (U. P.)	In this study, Amritarishta, prepared through traditional (Amritarishta-T) and modern (Amritarishta-M) methods, along with commercially available Amritarishta, were assessed for their antimicrobial activity against common human pathogens. Notably, all test preparations demonstrated substantial inhibition zones against the selected pathogens, suggesting their potential as natural drugs for treating infectious diseases caused by these organisms.
3.	Evaluation of Hepatoprotective Activity of Ayurvedic Amritarishta	Md. Abdur Rouf, Lecturer, Department of Pharmacy Gono Bishwabidyalay Mirzanagor, Savar, Dhaka, Bangladesh.	AMR, a polyherbal ayurvedic medicine, has demonstrated significant hepatoprotective efficacy at a dosage of 5 ml/kg in this study. The findings suggest the presence of active constituents contributing to this pharmacological effect. Further research is recommended to explore the underlying mechanisms of these observed activities.
4.	Antidiabetic Potential of Amritarishta Prepared by Traditional and Modern Methods in Alloxan Induced Diabetic rats	Preeti Tiwari Head of Department of Pharmacognosy, Dr. K. N. Modi Institute of Pharmaceutical Education and Research, Modinagar, Uttar Pradesh, India	This study investigated the effects of Amritarishta-T, Amritarishta-M, and commercially available Amritarishta on fasting blood glucose and serum lipid profile in alloxan-induced diabetic rats. Administering 2 ml/kg orally for 21 days resulted in decreased blood glucose, increased blood glutathione levels, and significant improvements in serum cholesterol, LDL, triglycerides, and HDL levels. Glibenclamide, a standard antidiabetic drug, was used for comparison. Overall, these formulations effectively normalized the assessed parameters in diabetic rats.
5.	Standardization of Marketed Amritarishta—A Herbal Formulation	Kiran A. Wadkar, Dept. of Pharmacognosy, Appasaheb Birnale College Of Pharmacy, South Shivaji Nagar, Sangli, Maharashtra, India.	This study seeks to standardize amritarishta through chromatographic and spectral analysis. The spectral data and HPTLC fingerprint of the ethanolic extract serve as valuable tools for routine standardization, enabling the assessment of batch-to-batch variation. Fraction I and II of the extract, along with standard luteolin and apigenin, were compared using TLC, HPTLC, and hplc to confirm the presence of these compounds.

2.2 Amalaki

References: The Ayurvedic Pharmacopoeia of India, Part- 01, Volume- 01, Pg. – 06

Amalaki consists of the fresh fruit pulp of Emblica officinalis Gaertn. (Family Euphorbiaceae), a small to medium-sized tree found in mixed deciduous forests, ascending to 1300 meters on hills, and cultivated in gardens and homeyards.

Synonyms

- **Sanskrit** : Amalaka, Amritaphala, Dhatriphala
- **Assamese** : Amlaku, Amlakhi, Amlakhu
- **Bengali** : Amla, Dhatri
- **English** : Emblic Myrobalan
- **Gujrati** : Ambala, Amala
- **Hindi** : Amla, Aonla
- **Kannada** : Nellikayi
- **Kashmiri** : Embali, Amli
- **Malayalam** : Nellikka
- **Marathi** : Anvala, Avalkathi
- **Oriya** : Anala, Ainla
- **Punjabi** : Aula, Amla
- **Tamil** : Nellikkai, Nelli
- **Telugu** : Usirika
- **Urdu** : Amla, Amlaj

Description

A. Macroscopic: The fruit is globose, 2.5-3.5 cm in diameter, fleshy, and smooth with six prominent lines. It is greenish when tender, changing to a light yellowish or pinkish color when mature, with a few dark specks. The taste is sour and astringent, followed by a delicately sweet taste.

B. Microscopic: The transverse section of the mature fruit shows an epicarp consisting of a single layer of epidermis and 2-4 layers of hypodermis. The epidermal cells are tabular in shape, covered externally with a thick cuticle, and appear polygonal in surface view. The hypodermal cells are tangentially elongated, thick-walled, and smaller in dimension than the epidermal cells.

The mesocarp forms the bulk of the fruit, consisting of thin-walled parenchymatous cells with intercellular spaces. The peripheral 6-9 layers are smaller, ovoid, or tangentially elongated, while the rest of the cells are larger, isodiametric, and radially elongated. Several collateral fibrovascular bundles are scattered throughout the mesocarp, consisting of xylem and phloem.

The xylem is composed of tracheal elements, fiber tracheids, and xylem fibers. The tracheal elements show reticulate, scalariform, and spiral thickenings. The xylem fibers are elongated with a narrow lumen and pointed ends. The mesocarp contains large aggregates of numerous irregular silica crystals.

Identity, Purity and Strength

1. **Foreign matter**: Not more than 2 percent (Appendix 2.2.2).
2. **Total Ash**: Not more than 7 percent (Appendix 2.2.3).
3. **Acid-insoluble ash**: Not more than 2 percent
4. **Alcohol-soluble extractive (On dried basis)**: Not less than 40 percent (Appendix 2.2.6).
5. **Water-soluble extractive**: Not less than 50 percent (Appendix 2.2.7).
6. **Moisture content**: Not less than 80 percent

- **Constituents** : Ascorbic acid and tannins
- **Properties and Action** :
  - **Rasa** : Amla, Kashaya, Madhura, Tikta, Katu
  - **Guna**: Ruksha, Laghu
  - **Virya** : Sita
  - **Vipaka** : Madhura
  - **Karma** : Tridosajit, Vrishya, Rasayana, Cakshushya
- **Important Formulations** : Cyavanaprasa.
- **Therapeutic Uses** : Raktapitta, Amlapitta, Prameha, Daha.
- **Dose** : 10-20 g of the drug.
  5-10 ml of fresh juice.

2.2.A Amalaki Svarasa

Reference: Sha.Sam.Ma. Kh.

हरिद्राचूर्णयुक्तो वा रसो धात्र्याः समाक्षिकः।

(Sha. S.M. Kh. 1/7)

Ingredients Used

Drug Name	Part Used	Proportion
Amalaki	Fr.	1 Part

Procedure:

1. Choose fresh, ripe Amla fruits that are free from blemishes and damage.
2. Wash the Amla fruits thoroughly under running water to remove dirt and impurities.
3. Cut the cleaned Amla fruits into small pieces to facilitate easier extraction of juice.
4. Remove the seeds from the chopped pieces.
5. Place the chopped Amla pieces into a blender and add a small amount of water to help in blending (if required).
6. Blend the Amla pieces until a smooth, consistent pulp is formed.
7. Pour the Amla pulp into a clean muslin cloth or a fine strainer. Squeeze the muslin cloth or use the strainer to extract the juice. Ensure that all the liquid is extracted by pressing thoroughly.
8. If needed, filter the juice again through a fine sieve or muslin cloth to ensure there are no pulp residues left in the juice.
9. Collect the filtered juice in a clean, dry container.

Anupana: Honey, Haridra Churna.

Pharmacodynamics

1. **Antioxidant Effects**: Amalaki, Haridra. Both Amalaki and Haridra are rich in antioxidants. Amalaki contains high levels of vitamin C and other polyphenols, while Haridra contains curcumin.
2. **Anti-inflammatory Effects**: Haridra, Curcumin, the active component of Haridra, inhibits inflammatory pathways by reducing the production of pro-inflammatory cytokines and enzymes such as COX-2.
3. **Immunomodulatory Effects**: Amalaki, Honey. Amalaki enhances both innate and adaptive immunity through its high vitamin C content and other immunomodulatory compounds. Honey also has immune-boosting properties.
4. **Digestive and Carminative Effects**: Honey aids in digestion by promoting the growth of beneficial gut bacteria and enhancing the activity of digestive enzymes.
5. **Antimicrobial Effects**: Honey, Haridra. Honey has natural antimicrobial properties due to its high sugar content, low pH, and the presence of hydrogen peroxide. Haridra exhibits broad-spectrum antimicrobial activity.
6. **Hepatoprotective Effects**: Amalaki supports liver health by promoting detoxification processes and protecting liver cells from damage.

Pharmacokinetics

1. **Absorption**: The combination of Amalaki with honey and Haridra is taken orally. Amalaki's vitamin

C and polyphenols, along with curcumin from Haridra, are absorbed through the gastrointestinal tract. Honey enhances the bioavailability of these compounds.

2. **Distribution**: Once absorbed, the active constituents are distributed throughout the body via the bloodstream. They reach various tissues, including the liver, immune cells, and inflamed areas.
3. **Metabolism**: The active compounds, particularly curcumin from Haridra, undergo metabolism primarily in the liver, where they are converted into various metabolites. Amalaki's components are also metabolized in the liver.
4. **Excretion**: The metabolites of the compounds in this formulation are excreted through the kidneys (urine) and, to some extent, through the gastrointestinal tract (feces).

RESEARCH UPDATES : No Data Found.

2.2.B AMALAKYADI CHURNA

Reference: Sha.Sam.M. Kha. Churnakalpana

आमलं चित्रकं पथ्या पिप्पली सैन्धवस्तथा।
चूर्णितोऽयं गणो ज्ञेयः सर्वज्वरविनाशनः।।
भेदी रुचिकरः श्लेष्मजेता दीपनपाचनः।

(Sha.Sam. M.Kha. 6/7)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Amalaki	Fr.	1 Part
Chitraka	Rt.	1 Part
Haritaki	Fr.	1 Part
Pippali	Fr.	1 Part
Saindhava	—	1 Part

Procedure:

1. Gather all the required dried ingredients for Amalakyadi Churna. Ensure each ingredient is clean and free from impurities.
2. Using a Khalva Yantra or a grinder, grind each ingredient separately into a fine powder.
3. Filter each powdered ingredient through a clean cloth to remove any coarse particles.
4. Combine all the filtered powders together in a clean, dry container. Mix thoroughly to ensure a uniform blend of all ingredients.
5. Filter the compound powder mixture once again through a clean cloth to ensure a fine consistency.
6. Store the final compound powder in sterilized, airtight glass containers to preserve its potency and freshness.
7. Label the containers with the name Amalakyadi Churna and the preparation date.

Dose: 3 – 6 gms.

Therapeutic Uses: All type of Jvara, Bedana, Aruchikara, Kaphahara, Dipana, Pachana.

PHARMACODYNAMICS

1. **Antipyretic Effect**: Amalaki, Haritaki, Pippali. These herbs help reduce fever by modulating the body's thermoregulatory center and reducing the synthesis of pyrogenic cytokines.
2. **Digestive and Carminative Effects**: Chitraka, Pippali, Saindhava. These ingredients stimulate digestive enzymes, improve gut motility, and enhance appetite.
3. **Laxative Effect**: Haritaki acts as a mild laxative, helping in bowel movement regulation.
4. **Anti-inflammatory and Analgesic Effects**: Chitraka, Pippali. These ingredients inhibit the production of inflammatory mediators like prostaglandins and cytokines, reducing inflammation and pain.
5. **Antioxidant and Immunomodulatory Effects**: Amalaki, Haritaki. These herbs possess strong antioxidant properties, scavenging free radicals and boosting the immune system.

PHARMACOKINETICS

1. **Absorption**: Amalakyadi Churna, taken orally, is absorbed through the gastrointestinal tract. The use of Saindhava (rock salt) enhances the bioavailability of the active compounds.
2. **Distribution**: Once absorbed, the active constituents are distributed throughout the body via the bloodstream. They reach various tissues, including the gastrointestinal tract, immune system, and sites of inflammation.
3. **Metabolism**: The active compounds are primarily metabolized in the liver. The metabolism involves biotransformation into more active or inactive forms, depending on the specific compound.
4. **Excretion**: The metabolites of the compounds in Amalakyadi Churna are excreted through the kidneys (urine) and, to some extent, through the gastrointestinal tract (feces).

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	To Evaluate the Efficacy of Amlakyadi Churnam in Management of Garbhini Pandu	D Anuradha, Dr. B.R.K.R. Govt. Ayurvedic College, opp.E.S.I. Hospital, A.G. Colony Road, Erragaddda, Hyderabad-500038, Tailangana.	A clinical study on anaemia in pregnancy using Amlakyadi churnam was conducted on 30 pregnant women at GAH Erragadda OPD. Each woman took 3 g of the churnam with honey twice daily for 90 days after light meals. The compound, comprising Amlaki, Yashtimadhu, and svarnamakshikabhasma, proved economical, safe, and effective without complications. Monthly assessments over 90 days revealed improved clinical symptoms, weight gain, and increased Hb% in all patients. No side effects were observed, and the treatment was well-tolerated.
2.	The Role of Amalaki Churna in the Management of Shvetpradara	Jadhvar Pallvi Tukaram, PG scholar, Dept. of Stree Rog Evam Prasutitantra, PMT'S Ayurvedic College, Shevgaon, Ahmednagar, Maharashtra, India	Acharya Charaka mentioned Kashaya Rasa is having pharmacological action like stambhana and kapha nashaka so Kashayarasa stop to srava 1-2 gm with honey BD for seven days.

2.2.c TRIPHALA RASAYANA

Reference: Cha.Chi. Rasayana Adhyaya

1. PRATHAMA TRIPHALA RASAYANA

जरणान्तेऽभयामेकां प्राग्भुक्ताद् द्वे विभीतके।
भुक्त्वा तु मधुसर्पिर्भ्यां चत्वार्यामलकानि च।।
प्रयोजयन् समामेकां त्रिफलाया रसायनम्।
जीवेद्वर्षशतं पूर्णमजरोऽव्याधिरेव च।। इति त्रिफलारसायनम्।

(Cha.Chi. Rasayana Adhyaya, 1/3/41-42)

Administer one Abhaya in the morning after ensuring digestion of the previous meal, followed by two Bibhitaki before meals, and three Amalaki with honey and ghee during meals.

Anupana: Madhu and Ghrita

Duration: 1 Year

Benefits: The Rasayana promotes a life lasting for one hundred years, free from aging and disease.

2. DVITIYA TRIPHALA RASAYANA

त्रैफलेनायसीं पात्रीं कल्केनालेपयेन्नवाम्।
तमहोरात्रिकं लेपं पिबेत् क्षौद्रोदकाप्लुतम्।।
प्रभूतस्नेहमशनं जीर्णे तत्र प्रशस्यते।
अजरोऽरुक् समाभ्यासाज्जीवेच्चैव समाः शतम्।।
इति त्रिफलारसायनमपरम्।

(Cha.Chi. 1/3/43-44)

Apply Triphala Kalka to a new iron vessel and let it sit for 24 hours. Then, extract the vessel coated with Triphala Kalka using water and honey. Consume this mixture with honey, and after digestion, follow it with Prabhuta Sneha Ashana.

Duration: 1 Year.

Benefits: One can enjoy a life spanning one hundred years, devoid of signs of aging and diseases.

3. TRITIYA TRIPHALA RASAYANA

मधुकेन तुगाक्षीर्या पिप्पल्या क्षौद्रसर्पिषा।
त्रिफला सितया चापि युक्ता सिद्धं रसायनम्।।
(इति त्रिफलारसायनमपरम्)

(Cha.Chi. 1/3/45)

Combining Triphala with Madhuka, Vamshalochana, Pippali, along with honey and Ghrita, or Triphala with Sita in equal quantities forms an effective Rasayana.

4. CHATURTHA TRIPHALA RASAYANA

सर्वलौहैः सुवर्णेन वचया मधुसर्पिषा।
विडङ्गपिप्पलीभ्यां च त्रिफला लवणेन च।।
संवत्सरप्रयोगेण मेधास्मृतिवलप्रदा।
भवत्यायुःप्रदा धन्या जरारोगनिवर्हणी।। इति त्रिफलारसायनमपरम्।

(Cha.Chi. 1/3/47)

Triphala combined with Sarva Lauha such as Suvarna, Vacha, Vidanga, Pippali, Lavana, along with honey and Ghrita, is consumed for its benefits.

Duration: 1 Year.

Benefits: Promotes Medha, Smriti and Balaprada, Ayuprada and Dhanya and Jara Roga Nibarhani.

PHARMACODYNAMICS

1. **Cognitive Enhancement (Medha and Smritiprada):** Triphala (especially Amalaki), Vacha, Pippali, Suvarna. These ingredients improve cognitive functions by enhancing neurogenesis, supporting neurotransmitter balance, and providing neuroprotective effects. Amalaki and Suvarna are known for their brain tonic properties, while Vacha and Pippali stimulate mental clarity and memory.
2. **Strength and Vitality (Balaprada):** Triphala, Ghrita, Vidanga, Sarvalauha. These components nourish

the body's tissues (Dhatus), improve digestion and nutrient absorption, and enhance overall strength and vitality. Ghrita acts as a carrier that enhances the bioavailability of nutrients and active compounds.

3. **Longevity (Ayuprada and Dhanya)**: Triphala, Honey, Suvarna. The synergistic effect of these ingredients supports cellular regeneration, combats oxidative stress, and maintains the balance of the body's doshas (Vata, Pitta, Kapha). Suvarna is particularly revered for its rejuvenating properties.
4. **Anti-aging (Jararoga Nibarhani)**: Triphala, Honey, Ghrita, Suvarna. These ingredients have strong antioxidant properties that reduce the effects of aging at the cellular level. They help in detoxifying the body, improving skin health, and maintaining youthful energy levels.

PHARMACOKINETICS

1. **Absorption**: The formulation, taken orally, is absorbed through the gastrointestinal tract. The presence of honey and Ghrita enhances the absorption of active ingredients, particularly fat-soluble compounds.
2. **Distribution**: Once absorbed, the active constituents are distributed throughout the body via the bloodstream. These ingredients reach various tissues, including the brain, muscles, and organs, where they exert their beneficial effects.
3. **Metabolism**: The active compounds undergo metabolism primarily in the liver, where they are biotransformed into more active or inactive forms. The components of Triphala, along with Vacha, Pippali, and Suvarna, have specific metabolic pathways that enhance their bioactivity.
4. **Excretion**: The metabolites of the compounds in this formulation are excreted through the kidneys (urine) and the gastrointestinal tract (feces).

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Standardization of Triphala Rasayana	Bali Chouhan Akanksha, PG Scholar Dept. of Shalakya Tantra, Rishikul Campus, UAU, Haridwar, Uttarakhand	Triphala Rasayana, described in Yogaratnakara, is prepared by mixing Triphala with vanshalochana, pippali, sita, or saindhava, validated through chemical experimentation. Formulated using the Churna Kalpana method with self-prepared kvatha dravya for bhavana, tablets meet pharmacopoeial standards for hardness, weight, and disintegration time.
2.	Role of Triphala Rasayana in the Prevention of Recurrent Rhinitis- An Open Clinical Trial	Kripa Shankar Sharma Assistant Professor, Department of Svasthavrita, Murari Lal Rasiwasiya Ayurvedic College, Charkhi Dadri, Dist. Bhiwani, Haryana, India	Triphala Rasayana, given twice daily as churna for 60 days, significantly alleviated recurrent rhinitis symptoms in adults and children, alongside Madhu & Ghrita. Clinical and hematological assessments showed consistent improvement up to the fourth follow-up, with significant results, except for IgE levels. Triphala Rasayana proves effective for long-term prevention of recurrent rhinitis.

2.2.D CHYAVANAPRASHA

Reference: AFI, Part I, page 37

बिल्वोऽग्निमन्थः श्योनाकः काश्मर्यः पाटलिर्बला।
पर्ण्यश्वतस्त्रः पिप्पल्यः श्वदंष्ट्रा बृहतीद्वयम्।।
शृङ्गी तामलकी द्राक्षा जीवन्ती पुष्करागुरु।
अभया चामृता ऋद्धिर्जीवकर्षभकौ शटी।।
मुस्तं पुनर्नवा मेदा सैला चन्दनमुत्पलम्।
विदारी वृषमूलानि काकोली काकनासिका।।
एषां पलोन्मितान् भागाञ्छतान्यामलकस्य च।
पञ्च दद्यात्तदैकध्यं जलद्रोणे विपाचयेत्।।
ज्ञात्वा गतरसान्येतान्यौषधान्यथ तं रसम्
तच्चामलकमुद्धृत्य निष्कुलं तैलसर्पिषोः।।
पलद्वादशके भृष्ट्वा दत्त्वा चार्धतुलां भिषक्।
मत्स्यण्डिकायाः पूताया लेहवत्साधु साधयेत्।।
षट्पलं मधुनश्चात्र सिद्धशीते प्रदापयेत्।
चतुष्पलं तुगाक्षीर्याः पिप्पली द्विपलं तथा।।
पलमेकं निदध्याच्च त्वगेलापत्रकेशरात्।
इत्ययं च्यवनप्राशः परमुक्तो रसायनः।।
कासश्वासहरश्चैव विशेषेणोपदिश्यते।
क्षीणक्षतानां वृद्धानां बालानां चाङ्गवर्धनः।।
स्वरक्षयमुरोरोगं हृद्रोगं वातशोणितम्।
पिपासां मूत्रशुक्रस्थान् दोषांश्चाप्यपकर्षति।।
अस्य मात्रां प्रयुञ्जीत योपरुन्ध्यान्न भोजनम्।
अस्य प्रयोगाच्च्यवनः सुवृद्धोऽभूत् पुनर्युवा।।
मेधां स्मृतिं कान्तिमनामयत्वमायुःप्रकर्षं बलमिन्द्रियाणाम्।
स्त्रीषु प्रहर्षं परमग्निवृद्धिं वर्णप्रसादं पवनानुलोम्यम्।।
रसायनस्यास्य नरः प्रयोगाल्लभेत जीर्णोऽपि कुटीप्रवेशात्।
जराकृतं रूपमपास्य सर्वं बिभर्ति रूपं नवयौवनस्य।।

(Cha. Chi., 1/1/62-74)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Bilva	Rt./ St. Bk.	48 gms
Agnimantha	Rt./ St. Bk.	48 gms
Shyonaka	Rt./ St. Bk.	48 gms
Gambhari	Rt./ St. Bk.	48 gms
Patala	Rt./ St. Bk.	48 gms
Bala	Pl.	48 gms
Shalaparni	Pl.	48 gms
Prishniparni	Pl.	48 gms
Mudgaparni	Pl.	48 gms
Mashaparni	Pl.	48 gms
Pippali	Fr.	48 gms
Gokshura	Pl.	48 gms
Brihati	Pl.	48 gms
Kantakari	Pl.	48 gms
Karkatashringi	Gl.	48 gms
Tamalaki	Pl.	48 gms
Draksha	Dr.Fr.	48 gms
Jivanti	Rt.	48 gms
Pushkara	Rt.	48 gms
Agru	Ht. Wd.	48 gms
Abhaya	P.	48 gms
Amrita	St.	48 gms
Ridhi	Sub. Rt. Tr.	48 gms
Jivaka	Rt. Tr.	48 gms
Rishabhaka	Rt. Tr.	48 gms
Sati	Rz.	48 gms
Musta	Rz.	48 gms
Punarnava (Rakta)	Pl.	48 gms
Meda	Rt. Tr.	48 gms
Ela	Sd.	48 gms
Chandana	Ht. Wd.	48 gms
Utpala	Fl.	48 gms
Vidari	Rt. Tr.	48 gms
Vrshamula	Rt.	48 gms
Kakoli	Sub. Rt.	48 gms
Kakanasika	Fr.	48 gms
Amlaka	Fr.	500 in no
Water for Decoction	–	12.288 L
Reduced to	–	3.072 L
Ghrita	–	288 gms
Taila	Ol.	288 gms
Matsyandika	–	2.400 kg
Madhu	–	288 gms
Tugakshiri	S.C.	192 gms
Pippali	Fr.	96 gms
Tvak	St. Bk.	48 gms
Ela	Sd.	48 gms
Patra	Lf.	48 gms
Kesara	Stmn.	48 gms

Procedure:

1. Bundle ripened fresh Amalaki in a piece of cloth.
2. Coarsely powder the ingredients from Bilva to Kakanasika and place them in a vessel.
3. Add 120 liters of water to the vessel. Suspend the Amalaki pottali in the vessel and boil the mixture until the water is reduced to one-fourth (30 liters).
4. Remove the Amalaki bundle from the vessel and strain the decoction and keep it separately.
5. Remove the seeds from the boiled Amalaki and make a paste of the pulp.
6. Strain the paste through a piece of cloth or a 40-mesh sieve over a wide-mouthed vessel to remove fibers.
7. Fry the strained pulp with ghrita (ghee) and taila (oil) until the moisture evaporates.
8. Add sugar to the strained decoction and boil the mixture to the lehyapaka stage (semi-solid consistency).
9. Add the fried pulp to the lehyapaka and boil the mixture again until well combined.
10. Add the fine powders of ingredients from Tugakshiri to Kesara to the lehya. Stir well and allow the mixture to cool.
11. Once cooled, add madhu (honey) to the mixture and mix thoroughly.
12. Store in air tight container.

Dose: 12- 24 gms.

Anupana: Water, Milk.

Therapeutic Indication: Kasa, Shvasa, Kshata, Kshina, Svarabheda, Hridroga, Mutraroga, Uroroga, Vatarakhta, Shukra Dosha, Pippasa, Rasayana, Medhya, Smritiprada, Jara.

PHARMACODYNAMICS

1. **Rejuvenation and Anti-aging**: Amalaki, Gokshura, Vidari, Meda, Kakoli. Rich in antioxidants and adaptogens, these ingredients combat oxidative stress, support cellular regeneration, and enhance overall vitality.
2. **Cognitive Enhancement**: Amalaki, Vacha, Pippali, Ela. These ingredients improve brain function, enhance neurotransmitter activity, and protect neural tissue.
3. **Immune Boosting**: Amalaki, Guduchi, Pippali. Boosts immune response, increases resistance to infections, and supports overall immune health.
4. **Respiratory Health**: Pippali, Gokshura, Kantakari, Brihati. These herbs have expectorant, bronchodilator, and anti-inflammatory properties

that clear respiratory passages and alleviate congestion.

5. **Digestive Health**: Pippali, Musta, Haritaki. Enhances digestion, improves nutrient absorption, and balances digestive fire (Agni).
6. **Cardiovascular Health**: Arjuna, Draksha, Pushkaramula. Supports heart health by improving cardiac function, enhancing blood circulation, and providing antioxidant protection to cardiac tissues.

PHARMACOKINETICS

1. **Absorption**: Chyavanaprasha is absorbed through the gastrointestinal tract. The presence of honey and ghee enhances the absorption of fat-soluble vitamins and compounds.
2. **Distribution**: Once absorbed, the active compounds are distributed via the bloodstream to various tissues and organs where they exert their therapeutic effects.
3. **Metabolism**: The ingredients undergo metabolism primarily in the liver. They are biotransformed into active metabolites that enhance their bioactivity.
4. **Excretion**: The metabolites are excreted through the kidneys (urine) and the gastrointestinal tract (feces).

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Chyavanaprasha: A Traditional Indian Bioactive Health Supplement	Rohit Sharma, Central Ayurveda Research Institute for Drug Development (CCRAS), Ministry of AYUSH, Government of India, 4-CN Block, Sector-V, Bidhannagar, Kolkata-700091, W.B., India; medamrao69@gmail.com	Chyavanaprasha preparation involves decocting herbs, extracting, mixing with honey, and adding aromatic powders. The final product resembles fruit jam, with a sweet, sour, and spicy taste. Scientific exploration is needed to understand its therapeutic potential due to scattered information. Efforts were made to compile data from various sources, including ancient texts and scientific literature, to highlight CP's therapeutic role.
2.	Chyavanaprasha: An Ayurvedic Bioactive Immune & Curative Health Supplement	Sneha Jadhav, Department of Pharmaceutics Vasantidevi Patil Institute of Pharmacy, Kodoli Tal- Panhala, Dist-Kolhapur-416114 (MHA)	Chyavanprasha, crafted from 50 Ayurvedic herbs, is a popular dietary supplement in India. It boosts muscle strength, rejuvenates cells, balances doshas, slows aging, enhances memory, and supports heart health, and aids digestion and respiratory functions.
3.	Golden Ager Chyavanaprasha with Meager Evidential Base from Human Clinical Trials	Rohit Sharma, Department of Rasashastra and Bhaishajya Kalpana, Faculty of Ayurveda, Institute of Medical Sciences, Banaras Hindu University, Varanasi-221005, Uttar Pradesh, India	The report aims to dispel Chyawanprasha usage misconceptions and guide researchers in bioactive natural products, drug development, functional foods, and nutraceuticals. National experts should convene to establish standardized CP research protocols.
4.	Pharmaceutical Standardization of Chyavanaprasha prepared by two different methods	Bharat Rathi, Professor, Dept. of RSBK, Mahatma Gandhi Ayurved College, Salod, Maharashtra, India.	The study compared pharmacy and traditional Chavanaprasha preparation methods, favoring the pharmacy approach due to better outcomes in time, yield, and physicochemical properties. Notably, frying in non-polar media may alter ascorbic acid. Considering polarity's impact on absorption, pharmacy-prepared Chawanaprash may offer superior efficacy, pending further validation.

2.2.E DHATRI LAUHA

Reference: AFI, Part I, Page 284

धात्रीचूर्णस्याष्टौ पलानि चत्वारि लौहचूर्णस्य।
यष्टीमधुकरजश्च द्विपलं दद्यादुपलघृष्टम्।।
अमृताक्वाथेनैतच्चूर्णं भाव्यञ्च सप्ताहम्।
चण्डातपेषु शुष्कं भूयः पिष्ट्वा नवे घटे स्थाप्यम्।।
घृतेन मधुना सहसंयुक्तं भुक्त्वादौ मध्यतोऽन्ते च।
त्रीनपि वारान् खादेत् पथ्यं दोषानुबन्धेन।।
भुक्तादौ नाशयति रोगान् पित्तानिलोद्भूतान्।
मध्येऽन्नावष्टम्भं जयति नृणां विदह्यते नान्नम्।।
पानान्नकृतान् दोषान् भुक्तान्ते शीलितं जयति।
एवं जीर्यति चान्नं शूलं नृणां सुकष्टमपि।।
हरति च सहसा युक्तो योगश्चायं जरत्पित्तम्।
चक्षुष्यः पलितघ्नः कफपित्तसमुद्भवान् जयति।।
प्रसादयत्यपि रक्तं पाण्डुत्वं कामलां जयति।।147।।

(B.R. Shula., 30/142-147)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Amalaki	P.	384 gms
Lauha Bhasma	—	192 gms

Drug Name	Part Used	Proportion
Yastimadhu	Rt.	96 gms
Amrita Kvatha	St.	Q.S.(Bhavana)

Procedure:

1. Take all the required dried ingredients for Dhatri Lauha. Ensure each ingredient is clean and free from impurities.
2. Using a Khalva Yantra (traditional mortar and pestle) or a grinder, grind each ingredient separately into a fine powder.
3. Filter each powdered ingredient through a clean cloth to remove any coarse particles.
4. Combine all the filtered powders together in a clean, dry container. Mix thoroughly to ensure a uniform blend of all ingredients.
5. Filter the compound powder mixture once again through a clean cloth to ensure a fine consistency.
6. Adding Amrita kvatha and triturate well for 7 times in 7 days.
7. Roll it into tablets or pills.
8. Expose the tray to sunlight or under hot air oven for several hours to days until the material is completely dry.
9. Once fully dried, collect the dried material. This final product is called Dhatri Lauha.
10. Store the Dhatri Lauha in a clean, dry, airtight container to preserve its potency and freshness.

Dose: ½ - 1 gm.

Anupana: Ghee, Honey.

Indication: Shularoga, Amalapitta, Netraroga, Anaha, Mandagni, Raktapitta, Pandu, Kamala, Palitya, Vibanda.

Pharmacodynamics

1. **Antioxidant and Rejuvenating Effects:** Amalaki is rich in vitamin C and other antioxidants that scavenge free radicals, reduce oxidative stress, and enhance cellular regeneration.
2. **Hematopoietic Effect**: Lauha Bhasma is a potent source of bioavailable iron, which is essential for hemoglobin synthesis and erythropoiesis.
3. **Anti-inflammatory and Healing Effects**: Yashtimadhu contains glycyrrhizin which has anti-inflammatory properties, and Amalaki supports tissue healing.
4. **Digestive Health**: Amalaki, Yashtimadhu. These herbs enhance digestive fire (Agni), improve nutrient absorption, and soothe the gastrointestinal tract.
5. **Liver Protection and Detoxification**: Amrita Kvatha enhances liver function, detoxifies the liver, and supports metabolic processes.
6. **Improvement of Eye Health**: Amalaki high vitamin C content and antioxidant properties of Amalaki support eye health and improve vision.

Pharmacokinetics

1. **Absorption**: The formulation is absorbed through the gastrointestinal tract. The presence of honey and ghee as anupana enhances the absorption of fat-soluble vitamins and minerals.
2. **Distribution**: Once absorbed, the active compounds are distributed via the bloodstream to various tissues and organs where they exert their therapeutic effects.
3. **Metabolism**: The ingredients undergo metabolism primarily in the liver. They are biotransformed into active metabolites that enhance their bioactivity.
4. **Excretion**: The metabolites are excreted through the kidneys (urine) and the gastrointestinal tract (feces).

Research Updates

Sr.No.	Article Name	Author Name	Result
1.	Dhatri Lauha in the Management of Iron Deficiency Anaemia: A Prospective Open Label Single Arm Multi Center Trial	Narayanam Srikanth, Deputy Director General, Departments of Ayurveda, Central Council for Research in Ayurvedic Sciences, Ministry of Ayush, Government of India.	The study involved 480 participants aged 18-60 with IDA, treated with Dhatri Lauha. After 45 days, there was a significant increase in mean Hb% from 8.46 ± 1.14 g/dl to 9.18 ± 1.61 g/dl ($P < 0.001$). Liver and kidney function remained normal, and no withdrawals due to adverse events occurred. Dhatri Lauha proves safe and effective in improving hemoglobin levels, red blood cell parameters, and iron stores in IDA patients.
2.	Importance of Rasayana Drugs in Dhatri Lauha W.S.R. to Garbhini Pandu (Iron Deficiency Anaemia in Pregnancy)	Deepika Khandelwal, Associate Professor, Department of Striroga & Prasutitantra, I.P.G.T. & R.A, Gujarat Ayurved University, Jamnagar, Gujarat, India.	Dhatri Lauha Results • Appearance - Rough • Colour – Greyish Brown • Odour – Light Sweetish • Taste – Start with sour and end with sweet • pH – 4.0 • LOD – 6.15% • Iron content as Fe_2O_3 – 37.70%w/w • Uniformity of weight – 5.20g±20 mg • Total ash – 35.14% w/w • Acid insoluble ash – 17.52% w/w • Water soluble extractive value – 23.07% • Alcohol soluble extractive value – 16.09%

Sr.No.	Article Name	Author Name	Result
3.	Clinical Study to Evaluate the Efficacy of Dhatri Lauha in the Management of Pandu Roga W.S.R. to Iron Deficiency Anaemia	Trivedi Atal Bihari, Associate Prof. H.O.D, Deptt. of Kayachikitsa J.I.A.R, Jammu, J&K India	In a two-month clinical trial involving 30 patients, Dhatri Lauha was evaluated for its efficacy in managing Iron Deficiency Anaemia (Pandu Roga). Patients were regularly assessed on subjective and hematological parameters, with follow-ups twice a month. Results indicate Dhatri Lauha's potency in treating Pandu Roga, attributed to its effectiveness in addressing Pitta Pradhana Vyadhi, where impaired colour and complexion (Panduta) occur due to vitiated Pitta.
4.	Role of Dhatri Lauha in Management of Garbhini Pandu Roga (Iron Deficiency Anaemia in Pregnant Women)	Dr. Lariya Neelam, Associate Professor, Department of Kayachikitsa, Sri Sai Institute of Ayurvedic Research and Medicine, Bhopal (MP)	In pregnancy, inadequate nutrition and pitta-dominant anaemia lead to pandu (anemia) prevalence. Aggravated pitta depletes nutrients, starting from rasa dhatu, impacting subsequent dhatus and ojas. Dhatri Lauha addresses this by balancing pitta and nourishing rasa dhatu, meeting key requirements per Charaka Samhita.

2.2.F Amalakyadi Gutika

Reference: Sha.Sam.Ma.Kha.Vati Kalpana

आमलं कमलं कुष्ठं लाजाश्च वटरोहकः।
एतच्चूर्णस्य मधुना गुटिकां धारयेन्मुखे।।
तृष्णां प्रवृद्धां हन्त्येषा मुखशोषं च दारुणम्।

(Sha.Sam.Ma.Kha.Vati Kalpana, 7/17)

Ingredients Used

Drug Name	Part Used	Proportion
Amalaki	Fr.	1 Part
Kamala	Sd.	1 Part
Kushtha	Bk.	1 Part
Lajja	Grain- Popped	1 Part
Vata	Ar. Rt.	1 Part
Madhu	—	Q.S.

Procedure:

1. Gather all the required dried ingredients for Amalakyadi Gutika. Ensure each ingredient is clean and free from impurities.
2. Using a Khalva Yantra or a grinder, grind each ingredient separately into a fine powder.
3. Filter each powdered ingredient through a clean cloth to remove any coarse particles.
4. Combine all the filtered powders together in a clean, dry container. Mix thoroughly to ensure a uniform blend of all ingredients.
5. Filter the compound powder mixture once again through a clean cloth to ensure a fine consistency.
6. Adding Madhu, until it becomes a concentrated form and suitable for making tablets or pills, then roll it into tablets or pills.
7. Expose the tray to sunlight or under hot air oven for several hours to days until the material is completely dry.
8. Once fully dried, collect the dried material. This final product is called Amalakyadi Gutika.
9. Store the Amalakyadi Gutika in a clean, dry, airtight container to preserve its potency.

Indication: Trishna, Mukhashosha.

Dose: 500 mg

Pharmacodynamics

1. **Hydrating and Moisturizing Effects**: Amalaki is rich in vitamin C and antioxidants that hydrate and nourish tissues. Kamala (lotus seeds) provide cooling and moisturizing effects, while the aerial roots of Vata help maintain moisture balance.
2. **Anti-inflammatory and Healing Effects**: Kushtha has potent anti-inflammatory properties that help reduce inflammation and irritation in the mouth and throat. Amalaki promotes healing due to its rich antioxidant profile.
3. **Cooling and Soothing Effects**: Kamala have a natural cooling effect, which helps to soothe and calm the mucous membranes. Lajja (popped grain) also contributes to the cooling and soothing action.
4. **Demulcent and Lubricating Effects**: Honey acts as a natural demulcent, coating and lubricating the mucous membranes, thereby protecting them from dryness and irritation.

Pharmacokinetics

1. **Absorption**: The active compounds in Amalakyadi Gutika are absorbed through the oral mucosa and gastrointestinal tract.
2. **Distribution**: Once absorbed, the active ingredients are distributed via the bloodstream to the targeted areas, primarily focusing on the oral cavity and mucous membranes.
3. **Metabolism**: The ingredients undergo metabolic transformation primarily in the liver. Amalaki and

other components are biotransformed into active metabolites that enhance their bioactivity.

4. **Excretion**: The metabolites are excreted through the kidneys (urine) and the gastrointestinal tract (feces).

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Preliminary Pharmaceutico Analytical Study of Amalakyadi Gutika	Ambika S, Post Graduate Scholar, Department of Rasashastra and Bhaishajya Kalpana, Sri Dharmasthala Manjunatheshwara College of Ayurveda Hospital, Hassan-573201, Karnataka	Amalakyadi Gutika Result Appearance – Solid round in shape Colour – Black Odour – Characteristic smell Taste Kashaya and tikta rasa pH – 3.6 Disintegration time – 10 minutes Friability – 0.01% Uniformity of weight –5.20g±–20 mg Total ash – 0.9% Acid insoluble ash – 0.01% Water Soluble ash – 2.55% Water soluble extractive value -0.134% Alcohol soluble extractive value – 0.022%

2.2.G PHALATRIKADI KVATHA

Reference: Sha.Sam.Ma.Kha.Kvatha Kalpana

फलत्रिकाब्ददार्वीणां विशालाया: शृतं पिबेत्।
निशाकल्कयुतं सर्वप्रमेहविनिवृत्तये।।

(Sha.Sam.Ma.Kha.Kvatha Kalpana, 2/109)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Amalaki	P.	1 Part
Haritaki	P.	1 Part
Bibhitaki	P.	1 Part
Musta	Rz.	1 Part
Daruharidra	Bk.	1 Part
Indravaruni	Rt.	1 Part
Haridra	Rz.	1 Part

Procedure:

1. Obtain the necessary herbs and ingredients required for Phalatrikadi Kvatha. Ensure each ingredient is dried and cleaned properly.
2. Grind each ingredient separately into a coarse powder.
3. Mix all the coarse powders properly in a clean, dry container.
4. Add sixteen times the amount of water to the mixture of coarse powders.
5. Allow the mixture to soak in the water overnight.
6. The next morning, subject the mixture to mild heat. Continue heating until the liquid reduces to 1/8th of its original quantity.
7. Once reduced, filter the mixture through a clean cloth to remove the solid residues.
8. Collect the filtrate in a clean container. This filtrate is known as Phalatrikadi Kvatha.

Dose: 48 ml.

Therapeutic Indications: All types of Diabeties.

PHARMACODYNAMICS

1. **Anti-diabetic Effects**: Amalaki, Haritaki, Bibhitaki, Daruharidra, Haridra. These herbs help to lower blood sugar levels by enhancing insulin sensitivity, promoting pancreatic function, and reducing glucose absorption in the intestines.
2. **Anti-inflammatory and Antioxidant Effects**: Amalaki, Haritaki, Bibhitaki, Haridra. Rich in antioxidants like vitamin C (Amalaki) and curcumin (Haridra), these herbs reduce oxidative stress and inflammation, common complications in diabetes.
3. **Liver Function and Detoxification**: Musta, Daruharidra. These herbs support liver function, helping in the detoxification process and improving overall metabolic functions.
4. **Digestive and Metabolic Effects**: Musta, Indravaruni. Improve digestion and metabolism, which can be impaired in diabetic conditions. Musta enhances digestive fire (Agni), and Indravaruni acts as a laxative and purgative, aiding in the elimination of toxins.

PHARMACOKINETICS

1. **Absorption**: The active compounds from the kvatha are absorbed through the gastrointestinal tract.
2. **Distribution**: Once absorbed, the active ingredients are distributed via the bloodstream to various tissues, including the pancreas, liver, and adipose tissues.
3. **Metabolism**: The compounds are metabolized primarily in the liver. Ingredients like Haridra (curcumin) undergo conjugation and other metabolic pathways to become bioactive.
4. **Excretion**: Metabolites are excreted through the kidneys (urine) and the gastrointestinal tract (feces).

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	A Critical Review of Phalatrikadi Kvatha WSR to Liver Disorders	Dr. Vipin Kumar, M.D. (Kaya Chikitsa), Ph.D., IMS, BHU, Varanasi, Lecturer, Deptt. of Kaya Chikitsa, SKD Govt. Ayurvedic College and Hospital, Muzaffar-nagar-251001, U.P.	The study highlights that Phalatrikadi kvatha drugs possess the following properties: Pittahara, Pittarechaka, Yakriduttejaka, Dipana, Rechana, Pachaka, Shothahara, Jvarahara, Kamala and Panduhara, Yakrita and Raktvikarahara, Tridoshahara, Rasayana, Mutrajanana, Pittasaraka, Anulomaka, Shvedaka, Dahaprashamana and Raktapittahara, which alleviate koshthashrita kamala and Pandu.

2.2.H Triphala Ghrita

Reference: Sha.Sam.Ma.Kha. Ghrita Kalpana

त्रिफलाया रसप्रस्थं प्रस्थं वासारसोद्भवम्।।
भृङ्गराजरसप्रस्थं प्रस्थमाजं पयः स्मृतम्।
दत्त्वा तत्र घृतप्रस्थं कल्कैः कर्षमितैः पृथक्।।
त्रिफला पिप्पली द्राक्षा चन्दनं सैन्धवं बला।
काकोली क्षीरकाकोली मेदा मरिचनागरम्।।
शर्करा पुण्डरीकं च कमलं च पुनर्नवा।
निशायुग्मं च मधुकं सर्वैरभिर्विपाचयेत्।।
नक्तान्ध्यं नकुलान्ध्यं च कण्डूं पिल्लं तथैव च।
नेत्रस्रावं च पटलं तिमिरं काचकं जयेत्।।
अन्येऽपि प्रशमं यान्ति नेत्ररोगाः सुदारुणाः।
त्रैफलं घृतमेतद्धि पाने नस्यादिषूचितम्।।

(Sha.Sam.Ma.Kha. Ghrita Kalpana, 9/66-71)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Triphala Kvatha	P.	768 ml
Vasa Kvatha	Pl.	768 ml
Bhringaraja Kvatha	Pl.	768 ml
Aja- Dugha	–	768 ml
Haritaki	P.	12 gms
Bibhitaki	P.	12 gms
Amalaki	P.	12 gms
Pippali	Fr.	12 gms
Draksha	Fr.	12 gms
Chandana	Bk.	12 gms
Saindhava	–	12 gms
Bala	Rt.	12 gms
Kakoli	Rt.	12 gms
Kshira Kakoli	Bulb	12 gms
Medha	Rt.	12 gms
Maricha	Fr.	12 gms
Nagara	Rz.	12 gms
Sharkara	–	12 gms
Pundrika	Pl.	12 gms
Kamala	Pl.	12 gms
Punarnava	Pl.	12 gms
Yashtimadhu	Rz.	12 gms
Go-Ghrita	–	768 ml

Procedure:

1. **Preparation of Kalka Dravya:**
   - Take all the ingredients for Kalka Dravya (Haritaki to Yashtimadhu) and grind them into a fine powder (Churna).
   - Add a sufficient quantity of water to the powdered herbs to make a thick paste (bolus form).
2. **Preparation of Drava Dravya:**
   - Prepare the Triphala kvatha, Vasa Kvatha and Bhringaraja Kvatha as per classical refrences.
   - Take also Aja – Dugdha as dravadravya.
3. **Mixing:**
   - In a clean vessel, add Go-Ghrita (1 Part) as mention quantity along with Kalka Dravya (1/4th part) and Drava Dravya (4 Parts).
4. **Heating:**
   - Place the mixture over a low flame. Stir continuously to prevent the Kalka from sticking to the bottom and ensure even cooking.
   - Maintain a consistent low flame to avoid burning the ingredients. Heat the mixture until the water content evaporates and sneha siddhi lakshanas.
5. **Filtering:**
   - Once the Sneha siddhi lakshana attains, remove it from the heat.
   - Filter the ghrita through a clean, dry cloth to remove the solid residues of the herbal paste.
6. **Cooling and Storage:**
   - Allow the filtered Ghrita to cool down to room temperature.
   - Store it in a clean, dry, airtight container. Keep the container in a cool, dark place to preserve the potency of the medicated oil or ghee.

Dose: 12 gms.

Anupana: Warm Water, Warm Milk.

Therapeutic Indications: Timira, Netrakandu, Kancha Roga, Netra Srava, Patala roga, Blindness.

PHARMACODYNAMICS

1. **Antioxidant and Anti-inflammatory Effects**: Triphala (Haritaki, Bibhitaki, Amalaki), Haridra, Daruharidra, Medha. These ingredients are rich in tannins, flavonoids, and other phytochemicals that reduce oxidative stress and inflammation, crucial for eye health.
2. **Ocular Health**: Triphala, Bhringaraja, Vasa. Promote the health of ocular tissues, improve vision, and provide nourishment.
3. **Antimicrobial Properties**: Pippali, Maricha, Nagara. These have antimicrobial properties that help in preventing and treating infections.
4. **Nutritional Support**: Goat milk, Ghee, Bala, Kakoli, Kshira Kakoli. Provide essential fatty acids, vitamins, and minerals that support overall health and strengthen eye tissues.

PHARMACOKINETICS

1. **Absorption**: The ghrita (ghee) base aids in the absorption of lipid-soluble active ingredients through the gastrointestinal tract.
2. **Distribution**: The active ingredients are distributed via the bloodstream to various tissues, including the ocular tissues.
3. **Metabolism**: The herbal components undergo metabolic processes primarily in the liver. Ghee acts as a medium to enhance the bioavailability of the herbs.
4. **Excretion**: Metabolities are excreted through the kidneys (urine) and the gastrointestinal tract (feces).

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Pharmaceutical Evaluation of Triphala Ghrita	Vishwalata Dhole, M.S. Shalakyatantra, Nashik, Maharashtra	Triphala Ghrita, utilized for treating various eye ailments, exhibited the following characteristics at room temperature: Refractive Index of 1.37, Loss on Drying at 0.88%, Ash value at 0.052% w/w, Acid value at 1.700% w/w, Iodine value at 32% w/w, Saponification value at 244.0% w/w, and Total fat content at 97.50%.
2.	Ingredients Identification and Pharmaceutical Analysis of Triphala Ghrita—A Compound Ayurvedic Formulation	Dhruva Dabh, M.S., Scholar, Department of Shalakya Tantra.	The aim was to establish the pharmacognostical and phytochemical profile of Triphala ghrita. Analysis revealed rosette crystals, epicarp cells, and tannin content. Pharmaceutical analysis showed a loss on drying of 0.01%, a saponification value of 199.94%, a specific gravity of 0.09%, a refractive index of 1.464%, and 12 spots in High-Performance Thin Layer Chromatography at 254 nm. These parameters provide a baseline for future studies.
3.	Efficacy of Triphala Ghrita Netratarpana in Computer Vision Syndrome	Deepak P. Sawant, Associate Professor and HOD, Shalakya Tantra, Vasantdada Patil Ayurvedic Medical College and Institute of Yoga, Sangli, MAA, India.	In this study, 60 patients were divided into two groups, with 30 in each. Group I received Triphala Ghrita Tarpana while Group II underwent exercise. All 60 patients completed the trial successfully. The results from the treatment group were satisfactory, showing effectiveness in alleviating all signs and symptoms of Computer Vision Syndrome (CVS), as supported by statistical analysis ($P<0.001$).
4.	Investigation on Anticataract Activity of Triphala Ghrita	K. N. Mahajan, Department of Pharmaceutical Sciences, Smt.S.S. Patil College of Pharmacy, Chopada-425127 (MHA), India	Triphala ghrita showed dose-dependent protection against galactose-induced cataracts in rats. Doses of 1080 mg and 2160 mg per 200 g exhibited significant delays in cataract onset and progression. The 1080 mg dose notably prevented stage II cataracts within 14 days and stage III cataracts within 21 days, with no stage III or IV cataracts observed after 30 days. Although the 2160 mg dose did not lead to stage IV cataracts after 30 days, it did induce stage III cataracts. The superior efficacy of the 1080 mg dose may be due to the antioxidant properties of gallic acid, ellagic acid, and ascorbic acid present in Triphala ghrita.

2.3 Bhallataka

References: The Ayurvedic Pharmacopoeia of India, Part 01, Volume 02, Pg. 37

Bhallataka consists of the mature fruit of Semecarpus anacardium Linn. (Family Anacardiaceae), a medium-sized tree found in moist deciduous forests throughout the country.

SYNONYMS

- **Sanskrit :** Arushakara, Bhallata.
- **Assamese :** Bhelaguti.

- **Bengali** : Bhela
- **English** : Marking Nut
- **Gujarati** : Bhilam
- **Hindi** : Bhilawa
- **Kannada** : Bhallataka
- **Kashmiri** : —
- **Malayalam** : Chera
- **Marathi** : Bibba
- **Oriya** : Bhollataki, Bholai
- **Punjabi** : Bhilawa
- **Tamil** : Tatamkottai, Scramkotati
- **Telugu** : Nallajidi, Nallajidiginga
- **Urdu** : Baladur, Bhilavan

Description

A. Macroscopic: Fruit laterally flattened, drupaceous, dark brown, nut 2.5-3 cm long, obliquely ovoid, smooth, shining with residual receptacle.

B. Microscopic

- **Fruit:**
  - The pericarp is differentiated into three layers: the epicarp, mesocarp, and endocarp.
  - In longitudinal section, the pericarp shows an outer epicarp consisting of a single layer of radially elongated and lignified epidermal cells.
  - Characteristic glands are found in the pericarp, exuding oil globules. These glands arise as small protuberances in the epicarp. Under the pressure exerted by mesocarp cells, some epidermal cells and the cuticle rupture, facilitating the exudation of oil globules from the oil glands.
  - The mesocarp is a very broad zone, 30-40 layers thick, composed mostly of parenchymatous cells with lysigenous cavities and fibrovascular bundles. Below the epidermis, a few outer parenchyma cells are smaller compared to the rest.
  - Rosette crystals of calcium oxalate are dispersed throughout the parenchymatous cells. Some cells dissolve, forming lysigenous cavities that increase in size with the maturity of the fruit. These cavities do not have any special lining and contain an acrid and irritant yellowish oily secretion.
  - The endocarp consists of two distinct layers. The innermost layer is prismatic, with very much elongated radial walls highly thickened. The outer layer is shorter and thinner than the prismatic layer but with cells similar to the former.
  - Many mesocarp parenchyma cells contain rosette crystals of calcium oxalate and oil drops in oil glands.
  - Lysigenous cavities of the mesocarp contain an oily vesicating substance, insoluble in water but soluble in alcohol, ether, and chloroform.
- **Powder:**
  - Dark-brown in color.
  - It exhibits rosette crystals of calcium oxalate along with oil globules.

Identity, Purity and Strength

1. **Foreign matter:** Not more than 1 percent (Appendix 2.2.2).
2. **Acid-insoluble ash:** Not more than 0.5 percent (Appendix 2.2.4).
3. **Alcohol-soluble extractive:** Not less than 11 percent (Appendix 2.2.6).
4. **Water-soluble extractive:** Not less than 5 percent (Appendix 2.2.7).

Constituents : Tarry oil containing Anacardic Acid and a non-volatile alcohol known as Cardol.

Properties and Action

- **Rasa** : Madhura, Katu, Tikta, Kashaya
- **Guna** : Laghu, Tikshana, Snigdha
- **Virya** : Ushna
- **Vipaka** : Madhura
- **Karma** : Vatahara, Kaphahara, Dipana, Pachana, Chedi, Bhedi, Medhya

Important Formulations : B. Rasayana, B. Modaka, Amrita Bhallataka Leha, Sanjivani Vati

Therapeutic Uses : Anaha, Grahani, Gulma, Krmi, Kushtha.

Dose : 1.2 g of the drug in Kshirapaka form.

2.3.A Bhallataka Modaka

Reference: B.R., Pliha-Yakrit Rogadhikara

भल्लातकाभयाजाजीगुडेन सह मोदकः।
सप्तरात्रान्निहन्त्याशु प्लीहानमतिदारुणम्।।

(B.R., Pliha-Yakrit Rogadhikara, 41/49)

Ingredients Used

Drug Name	Part Used	Proportion
Shuddha Bhallataka	Fr.	1 Part
Haritaki	P.	1 Part
Jira	Fr.	1 Part
Guda	–	6 Parts

Procedure:

1. Gather all the required dried ingredients for Bhallataka Modaka. Ensure each ingredient is clean and free from impurities.
2. Using a Khalva Yantra or a grinder, grind first three ingredient separately into a fine powder.
3. Take guda (jaggery) and water. Make a gudapaka (3-4 thread consistency).
4. Then add all thefine powdered drugs.
5. Stir well until suitable for tablets form (Modaka shape).
6. Dry properly and store in a sterilized, airtight container.

Dose: 1 gm for 7 Days

Anupana: Warm milk

Therapeutic Indications: Pliha Vriddhi Vikara Nashta

PHARMACODYNAMICS

1. **Anti-inflammatory and Hepatoprotective Effects:** Shuddha Bhallataka, Haritaki, Jira. Shuddha Bhallataka contains bioactive compounds such as bhilawanols which have strong anti-inflammatory properties. Haritaki and Jira also contribute with their anti-inflammatory and hepatoprotective effects.
2. **Digestive and Metabolic Enhancement:** Jira, Haritaki. Jira is known for enhancing digestive functions and improving metabolism. Haritaki supports digestive health and acts as a mild laxative.
3. **Immunomodulatory Properties:** Shuddha Bhallataka. Bhallatak has immunomodulatory properties that help in boosting the immune system.
4. **Antioxidant Effects:** Haritaki, Jira. Both ingredients contain antioxidants that neutralize free radicals and reduce oxidative stress.

PHARMACOKINETICS

1. **Absorption:** The active constituents from Shuddha Bhallataka, Haritaki, and Jira are absorbed through the gastrointestinal tract. The presence of jaggery (Guda) may facilitate the absorption due to its carbohydrate content.
2. **Distribution:** Once absorbed, the bioactive compounds are distributed throughout the body, reaching the liver and spleen where they exert their therapeutic effects.
3. **Metabolism:** The ingredients undergo metabolism in the liver. Bhallataka's active compounds are metabolized into their active forms, which are then available to exert their therapeutic effects.
4. **Excretion:** Metabolites are excreted through the kidneys (urine) and the gastrointestinal tract (feces).

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Effect of Bhallataka Modaka In CCl4 Induced Acute-hepatotoxicityin Rats	Harmeet Kour, International Ayurvedic Medical Journal.	This study highlights the significant hepatoprotective effects of Bhallataka Modaka against CCl4-induced liver damage in rats. It was observed that Bhallataka Modaka improved biochemical parameters (AST, ALT, ALP, total protein, albumin) and liver histopathology to a degree comparable to that of Liv. 52.

2.3.B BHALLATAKA GHRITA

Reference: B.R., Gulma Rogadhikara

1. PRATHAMA

भल्लातकानां द्विपलं पञ्चमूलं पलोन्मितम्।
साध्यं विदारीगन्धाढ्यमापोथ्य सलिलाढके।।
पादावशेषे पूते च पिप्पलीं नागरं वचाम्।
विडङ्गं सैन्धवं हिङ्गु यावशूकं विडं शटीम्।।
चित्रकं मधुकं रास्नां पिष्ट्वा कर्षसमं भिषक्।
प्रस्थञ्च पयसो दत्त्वा घृतप्रस्थं विपाचयेत्।।
एतद्भल्लातकं नाम कफगुल्महरं परम्।
प्लीहपाण्ड्वामयश्वासग्रहणीकासगुल्मनुत्।।

(B.R., Gulma Rogadhikara, 32/155-158)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Kvatha Dravya		
Shuddha Bhallataka	Fr.	93 gms
Shalaparni	Pl.	46 gms
Prishanaparni	Pl.	46 gms
Kantkari	Pl.	46 gms
Brihati	Pl.	46 gms
Gokshura	Pl.	46 gms
Vidarikanda	Bk.	46 gms
Water for decoction	—	3 Lts
Kalka Dravya		
Pippali	Fr.	12 gms
Shunthi	Rz.	12 gms
Vacha	Rz.	12 gms
Vidanga	Rz.	12 gms
Saindhava	—	12 gms
Shuddha Hingu	Exd.	12 gms
Yavakshara	—	12 gms

Drug Name	Part Used	Proportion
Vida Lavana	–	12 gms
Kachura	Dr. Rz.	12 gms
Chitaraka	Rt.	12 gms
Mulethi	Rt.	12 gms
Rasana	Lf.	12 gms
Go- Ghrita	–	750 gms
Go- Dugdha	–	750 ml

Procedure:

1. **Preparation of Kalka Dravya:**
   - Take all the ingredients for Kalka Dravya (Pippali to Rasana) and grind them into a fine powder (Churna).
   - Add a sufficient quantity of water to the powdered herbs to make a thick paste (bolus form).
2. **Preparation of Drava Dravya:**
   - Prepare the kvatha, by adding kvatha dravya from shuddha bhallataka to Vidarik and as per classical refrences.
   - Take also Go - Dugdha as dravadravya
3. **Mixing:**
   - In a clean vessel, add Go Ghrita as mention quantity along with Kalka Dravya and Drava Dravya.
4. **Heating:**
   - Place the mixture over a low flame. Stir continuously to prevent the Kalka from sticking to the bottom and ensure even cooking.
   - Maintain a consistent low flame to avoid burning the ingredients. Heat the mixture until the water content evaporates and sneha siddhi lakshanas.
5. **Filtering:**
   - Once the Sneha siddhi lakshana attains, remove it from the heat.
   - Filter the ghrita through a clean, dry cloth to remove the solid residues of the herbal paste.
6. **Cooling and Storage:**
   - Allow the filtered Ghrita to cool down to room temperature.
   - Store it in a clean, dry, airtight container. Keep the container in a cool, dark place to preserve the potency of the medicated oil or ghee.

Dose: 6 - 12 gms.

Anupana: Warm Milk.

Therapeutic Indications: Kaphaja Gulam, Pliha Roga, Pandu Roga, Shvasa, Grahni, Kasa.

2. Dvitiya

भल्लातकात्कल्ककषायपक्वं सर्पिः पिबेच्छर्करया विमिश्रम्।
तद्वक्तगुल्मं विनिहन्ति पीतं वलासगुल्मं मधुना समेतम्।।

(B.R., Gulma Rogadhikara, 32/159)

Ingredients Used

Drug Name	Part Used	Proportion
Shuddha Bhallataka Kalka	Fr.	250 gms
Shuddha Bhallataka Kvatha	Fr.	4 kgs
Go-Grita	–	1 kg
Water for Kvatha	–	16 lts

Procedure:

1. **Preparation of Kalka Dravya:**
   - Take the mentioned Quantity of Bhallataka and grind them into a fine powder (Churna).
   - Add a sufficient quantity of water to the powdered herbs to make a thick paste (bolus form).
2. **Preparation of Drava Dravya:**
   - Prepare the Bhallataka kvatha as per classical refernces.
3. **Mixing:**
   - In a clean vessel, add Go-Ghrita as mention quantity along with Kalka Dravya and Drava Dravya.
4. **Heating:**
   - Place the mixture over a low flame. Stire continuously to prevent the Kalka from sticking to the bottom and ensure even cooking.
   - Maintain a consistent low flame to avoid burning the ingredients. Heat the mixture until the water content evaporates and sneha siddhi lakshanas.
5. **Filtering:**
   - Once the Sneha siddhi lakshana attains, remove it from the heat.
   - Filter the ghrita through a clean, dry cloth to remove the solid residues of the herbal paste.
6. **Cooling and Storage:**
   - Allow the filtered Ghrita to cool down to room temperature.
   - Store it in a clean, dry, airtight container. Keep the container in a cool, dark place to preserve the potency of the medicated oil or ghee.

Dose: 3- 6 gms.

Anupana: Sugar and Warm Milk.

Therapeutic Indications: Kaphaja Gulma.

Pharmacodynamics

1. **Antipyretic and Anti-inflammatory Effects:** Bhallataka, Shunthi, and Pippali inhibit the production of

pyrogenic and pro-inflammatory cytokines, reducing fever and inflammation.

2. **Digestive and Carminative Effects**: Vidarikanda, Shalaparni, Prishanaparni, Kantkari, and Gokshura enhance digestive enzyme activity, improve gut motility, and reduce bloating and gas formation.
3. **Hepatoprotective Effects**: Bhallataka, Mulathi, and Rasana promote liver function, protect liver cells from damage, and support detoxification processes.
4. **Respiratory and Expectorant Effects**: Kantkari, Pippali, and Shunthi aid in clearing respiratory passages, reducing symptoms of cough and breathlessness.
5. **Immunomodulatory Effects**: Bhallataka and Go-Ghrita enhance immune function by stimulating the production of white blood cells and modulating immune responses.
6. **Antimicrobial Effects**: Vidanga, Saindhava, Shuddha, Hingu and Chitaraka possess broad-spectrum antimicrobial properties, inhibiting the growth of bacteria and viruses.
7. **Adaptogenic Effects**: Bhallataka and Rasana help the body cope with stress by balancing stress hormones and improving overall resilience.

PHARMACOKINETICS

1. **Absorption**: Taken orally, the decoction and paste (kvatha and kalka dravyas) are absorbed through the gastrointestinal tract, with bioactive compounds being efficiently extracted during the preparation process.
2. **Distribution**: The active compounds are distributed throughout the body via the bloodstream, targeting various systems such as the digestive, hepatic, respiratory, and immune systems to exert their therapeutic effects.
3. **Metabolism**: The ingredients are metabolized primarily in the liver, where they may be transformed into more active or inactive forms. The liver enzymes play a crucial role in the biotransformation of the active constituents.
4. **Excretion**: Metabolites are excreted through the kidneys (urine) and the gastrointestinal tract (feces), ensuring the elimination of waste products. The presence of Go-Ghrita (ghee) enhances the bioavailability and absorption of fat-soluble compounds, supporting efficient excretion.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Bhallatakadi Ghrita: Development and evaluation with reference to Murchcchhana and Shata-Dhauta Process	Sandesh R. Wayal, Center for Research and Development, PRIST University, Thanjavur, Tamilnadu, India	This study aimed to develop cow ghee-based Polyherbal Bhallatakadi Ghrita formulations, comparing them with traditional Ayurvedic processes. Plants were identified, processed, and used to create the formulations, which were evaluated for various properties including antioxidant activity and stability. Results indicated maintained ghee characteristics, dose-dependent antioxidant activity, and shelf life ranging from 1.6 to 3.3 years under accelerated conditions and 2.2 to 3.8 years under real-time stability. Standardization is essential for ensuring consistent quality and efficacy.

2.3.c BHALLATAKA GUDA

Reference: B.R., Arsha Rogadhikara

भल्लातकसहस्रे द्वे जलद्रोणे विपाचयेत्।
पादशेषे रसे तस्मिन् पचेद् गुडतुलां भिषक्।।
भल्लातकसहस्रार्द्धं छित्त्वा तत्र प्रदापयेत्।
सिद्धेऽस्मिंस्त्रिफलाव्योषयमानीमुस्तसैन्धवम्।।
कर्षांशसंमितं दद्यात् त्वगेलापत्रकेशरम्।
खादेदग्निबलापेक्षी प्रातरुत्थाय मानवः।।
कुष्ठार्शः कामलामेहग्रहणीगुल्मपाण्डुताः।
हन्यात्प्लीहोदरं कासक्रिमिरोगभगन्दरान्।।
गुडभल्लातको ह्येष श्रेष्ठश्चार्शोविकारिणाम्।।

(B.R., Arsha Rogadhikara, 9/129-133)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Shuddha Bhallataka	Fr.	2500 in number
Guda	—	5 Kg
Amalaki	P.	12 gms
Haritaki	P.	12 gms
Bibhitaki	P.	12 gms
Shunthi	Rz.	12 gms
Pippali	Fr.	12 gms
Maricha	Fr.	12 gms
Ajvayana	Fr.	12 gms
Musta	Rz.	12 gms

Drug Name	Part Used	Proportion
Saindhava Lavana	—	12 gms
Dalachini	Bk.	12 gms
Ela	Sd.	12 gms
Teja Patra	Lf.	12 gms
Nagakeshara	Sd.	12 gms
Water	—	13 Lts

Procedure:

1. Take 2000 pieces of purified Bhallataka and add 13 liters of water.
2. Reduce the mixture to one-fourth of its original volume.
3. Add guda (jaggery) to the filtered kvatha (decoction) and cook on low heat until it reaches a 3-4 thread consistency.
4. Then add all the remaining powdered drugs.
5. Stir well and allow the mixture to cool.
6. Store in air tight container.

Dose: 2-5 gms.

Anupana: Milk, Water.

Therapeutic Indications: Kushtha, Kamala, Kasa, Plihodara, Krimi, Prameha, Pandu, Bagandara, Arsha.

2nd Reference:

दशमूलामृता भार्गी श्वदंष्ट्रा चित्रकं शटी।
भल्लातकसहस्रं च पलांशं क्वाथयेद् बुधः।।
पादशेषे जलद्रोणे रसे तस्मिन् विपाचयेत्।
दत्त्वा गुडतुलामेकां लेहीभूतं समुद्धरेत्।।
माक्षिकं पिप्पलीं तैलमौरुबूकञ्च दापयेत्।
अर्शः कासमुदावर्त्तं पाण्डुतां शोथमेव च।।
कुडवं कुडवं चात्र त्वगेलामरिचं तथा।
नाशयेद्ग्रहिसादं च गुडभल्लातकः स्मृतः।।

(B.R., Arsha Rogadhikara, 9/134-137)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Shuddha Bhallataka	Fr.	1000 in Number
Dashamula	Rt./ Pl.	460 Gms
Guduchi	St.	46 Gms
Gokshura	Pl.	46 Gms
Chitraka	Rt.	46 Gms
Kachura	Dr. Rz.	46 Gms
Guda	—	5 kgs
Madhu	—	190 Gms
Pippali	Fr.	190 Gms
Eranda Taila	—	190 Gms
Dalachini	Bk.	190 Gms
Ela	Sd.	190 Gms
Maricha	Fr.	190 Gms
Water	—	13 Lts

Procedure:

1. Take 2000 pieces of purified Bhallataka and add 13 liters of water.
2. Reduce the mixture to one-fourth of its original volume.
3. Add Guda (jaggery) to the filtered kvatha (decoction) and cook on low heat until it reaches a 3-4 thread consistency.
4. Then add all the remaining powdered drugs.
5. Stire well and allow the mixture to cool.
6. Store in air tight container.

Dose: 5 Gms

Anupana: Milk and Water

Therapeutic Indications: Arsha, Kasa, Pandu, Shotha, Agnimandya.

PHARMACODYNAMICS

1. **Anti-inflammatory and Antioxidant Effects:** Shuddha Bhallataka, Haritaki, Bibhitaki, Shunthi, Pippali, Maricha, Ajavayana, Musta, Saindhava Lavana, Dalachini, Ela, Teja Patra, Nagakesara. These ingredients possess potent anti-inflammatory and antioxidant properties, which help in reducing inflammation, scavenging free radicals, and protecting cells from oxidative damage.
2. **Digestive and Carminative Actions:** Shunthi, Pippali, Maricha, Ajavayana, Musta, Saindhava Lavana, Dalachini, Ela, Teja Patra. These herbs improve digestion, relieve flatulence, and alleviate gastrointestinal discomfort.
3. **Hepatoprotective Effects:** Amalaki, Haritaki, Bibhitaki. These herbs have hepatoprotective properties, which help in protecting the liver from damage and promoting its regeneration.

PHARMACOKINETICS

1. **Absorption:** The active constituents are absorbed through the gastrointestinal tract.
2. **Distribution:** Distributed to various tissues and organs, especially the liver and spleen, where they exert their therapeutic effects.
3. **Metabolism:** Metabolized in the liver to active metabolites.
4. **Excretion:** Metabolites are excreted mainly through urine and feces.

RESEARCH UPDATES : No Data Found.

2.3.D BHALLATAKADI TAILA

Reference: B.R. Nadivrana Rogadhikara

भल्लातकार्कमरिचैर्लवणोत्तमेन सिद्धं विडङ्गरजनीद्वयचित्रकैश्च।
स्यान्मार्कवस्य च रसेन निहन्ति तैलं नाडीं कफानिलकृतामपची-व्रणांश्च।। (B.R., Nadivrana Rogadhikara, 50/25)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Bhallataka	P.	1 Part
Arka	Rt.	1 Part
Maricha	Fr.	1 Part
Saindhava	—	1 Part
Vai- Vidanga	Fr.	1 Part
Haridra	Rz.	1 Part
Daru Haridra	Bk.	1 Part
Chitraka	Bk.	1 Part
Tila Taila	—	4 Ser
Bilava Svarasa	—	1 Ser

Procedure:

1. **Preparation of Kalka Dravya:**
   - Take all the ingredients for Kalka Dravya (Shuddha Bhallatak to Chitraka) and grind them into a fine powder (Churna).
   - Add a sufficient quantity of water to the powdered herbs to make a thick paste (bolus form).
2. **Preparation of Drava Dravya:**
   - Prepare the Bilava Svarasa as per classical references.
3. **Mixing:**
   - In a clean vessel, add Tila taila as mention quantity along with Kalka Dravya and Drava Dravya.
4. **Heating:**
   - Place the mixture over a low flame. Stir continuously to prevent the Kalka from sticking to the bottom and ensure even cooking.
   - Maintain a consistent low flame to avoid burning the ingredients. Heat the mixture until the water content evaporates and sneha siddhi lakshanas.
5. **Filtering:**
   - Once the Sneha siddhi lakshana attains, remove it from the heat.
   - Filter the taila through a clean, dry cloth to remove the solid residues of the herbal paste.
6. **Cooling and Storage:**
   - Allow the filtered taila to cool down to room temperature.
   - Store it in a clean, dry, airtight container. Keep the container in a cool, dark place to preserve the potency of the medicated oil or ghee.

Therapeutic Indications: Nadivarna, Apachi.

PHARMACODYNAMICS

1. **Anti-inflammatory and Antimicrobial Effects:** Bhallataka, Arka, Maricha, Vai-Vidanga, Haridra, Daru Haridra, Chitraka. These herbs possess potent anti-inflammatory and antimicrobial properties, which help in reducing inflammation, controlling infection, and promoting wound healing.
2. **Analgesic and Antipruritic Actions:** Bhallataka, Arka, Maricha. These herbs provide relief from pain and itching associated with skin disorders.
3. **Wound Healing and Tissue Repair:** Bilva Svarasa, Tila Taila. Bilva Svarasa and Tila Taila promote wound healing by facilitating tissue repair, reducing inflammation, and preventing infection.

PHARMACOKINETICS

1. **Absorption:** The active constituents are absorbed through the skin and penetrate deep into the tissues.
2. **Distribution:** Distributed to the affected skin areas, where they exert their therapeutic effects.
3. **Metabolism:** Metabolized locally within the skin tissues.
4. **Excretion:** Metabolites are eliminated locally or may be absorbed systemically and excreted through urine and feces.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Evaluation of Shelf Life of Bhallataka Taila (Oil).	Anu Ruhilaa, All India Institute of Ayurveda, New Dehli.	The stability study maintained temperature and humidity at 40 ± 2°C and 75 ± 5%, respectively. Initial and subsequent assessments at 1, 3, and 6 months evaluated formulation degradation. Microbial and heavy metal tests ensured product safety. Results show a shelf life of Bhallataka Taila (Oil) at 4.89 years, surpassing government guidelines. The oil's lack of liquid media and high PUFA and tocopherol content enhance stability. Analytical parameters, including moisture content, specific gravity, acid value, peroxide value, saponification value, and viscosity, met standards, ensuring therapeutic safety.

2.3.E Bhallataka Avaleha

Reference: B.R., Arsha Rogadhikara

सुपक्वभल्लातफलानि सम्यग् द्विधा विधायाढकसम्मितानि।
विपाच्य तोयेन चतुर्गुणेन चतुर्थशेषे व्यपनीय तानि।।
पुनः पचेत्क्षीरचतुर्गुणेन घृतांशयुक्तेन घनं यथा स्यात्।
सितोपला षोडशभिः पलैश्च विमर्द्य संस्थाप्य दिनानि सप्त।।
ततः प्रयोज्याग्निबलेन मात्रां जयेद्विकारानखिलान् गुदोत्थान्।
कचाः सुनीला घनकुञ्चिताग्राः स्युस्तार्ध्यदृष्टिश्च शशाङ्ककान्तिः।।
जवो हयानां बलमुत्तमं च स्वरो मयूरस्य हुताशदीप्तिः।
स्त्रीवल्लभत्वं विविधप्रभावो नीरोगता द्वित्रिशतायुरेव।।
न चान्नपाने परिहार्यमस्ति न चातपे नाध्वनि मैथुने च।
प्रयोगकाले सकलामयानां राजाधिराजश्च रसायनानाम्।।

(B.R., Arsha Rogadhikara, 9/157-161)

Ingredients Used

Drug Name	Part Used	Proportion
Shuddha Bhallataka	Fr.	2980 gms
Water	—	12 lts
Ghrita	—	750 gms
Sugar	—	750 gms
Go- Dudha	—	12 Lts

Procedure:

1. First, purified Bhallataka is taken and then cow's milk is added to it.
2. Cooked thoroughly until it reaches a semi-solid consistency (Mava/ Khoya).
3. Then paste of Bhallataka is fried in ghee.
4. Separately, in a stainless steel utensil, required water and sugar are mixed and cooked to form a two-thread consistency.
5. Afterward, the bhrjita Bhallataka is added to the syrup.
6. Stir well and allow the mixture to cool.
7. Store in air tight container.

Dose: 5-10 Gms.

Anupana: Go- Dudha with sugar.

Therapeutic Indications: Arsha Roga, Balaya, Vrishya.

Pharmacodynamics

1. **Hemorrhoid Relief:** Shuddha Bhallataka, Ghrita, Sugar, Go-Dudha. Shuddha Bhallataka has anti-inflammatory properties, which help reduce inflammation associated with hemorrhoids. Ghrita and sugar provide soothing effects, while Go-Dudha helps in cooling the body and reducing discomfort.
2. **Strength and Vitality Enhancement:** Shuddha Bhallataka, Ghrita, Sugar, Go-Dudha. Shuddha Bhallataka is known for its Rasayana (rejuvenating) properties, which help enhance strength and vitality. Ghrita and sugar provide nourishment and energy, while Go-Dudha contributes to overall well-being.
3. **Aphrodisiac and Sexual Potency Enhancement:** Shuddha Bhallataka, Ghrita, Sugar, Go-Dudha. Shuddha Bhallataka is considered Vrishya (aphrodisiac) in Ayurveda, promoting sexual health and potency. Ghrita and sugar provide nourishment to the reproductive system, while Go-Dudha enhances reproductive fluids and vitality.

Pharmacokinetics

1. **Absorption:** Active constituents are absorbed through the digestive tract. Facilitates the absorption of therapeutic compounds into the bloodstream, allowing them to reach the target tissues and exert their effects.
2. **Distribution:** Distributed to various organs and tissues, including the digestive system and reproductive organs.
3. **Metabolism:** Metabolized by the liver and other organs.
4. **Excretion:** Metabolites are excreted through urine and feces.

Research Updates

Sr.No.	Article Name	Author Name	Result
1.	Standardization of Bhallataka Avaleha	Harshal J. Shende, MD (RSBK); Vishwaharta Ayurved Infertility & Research Centre, Mumbai, MHA.	Bhallataka underwent Shodhana with Eishtika churna, resulting in 8.64% oil content in the Etheral soluble extract test. Maximum oil loss of 134 gm occurred due to adsorption by Eishtika churna. The process produced a dark Avaleha with sweet and astringent taste. Total yield obtained was B1-1240 gm, B2-1257 gm, B3-1232 gm. The mean Acid insoluble ash was 0.13%, indicating maximum bioavailability. The mean pH was 4.8, reflecting acidity.
2.	To study the anti-microbial activity of standardized Bhallataka Avaleha	Harshal J. Shende, MD (RSBK); Vishwaharta Ayurved Infertility & Research Centre, Mumbai, MHA	The aim was to assess the antimicrobial activity of Bhallataka Avaleha against various microbes. It demonstrated potent antibacterial effects, particularly against bacteria causing respiratory tract infections. Significant bacteriostatic activity was observed against Streptococcus pneumoniae and Streptococcus pyogenes.

2.3.F Bhallatakadi Lepa

Reference: B.R., Kushtha Rogadhikara

भल्लातकद्वीपिसुधार्कमूलं गुञ्जाफलत्र्यूषणशङ्खचूर्णम्
तुत्थं सकुष्ठं लवणानि पञ्च-क्षारद्वयं लाङ्गलिकाञ्च पक्त्वा।।
स्नुह्यर्कदुग्धे घनमायसस्थ शलाकया तद्विदधीत लेपम्।
कुष्ठे किलासे तिलकालके च सर्वेषु दुर्नाममु चर्मकीले।।

(B.R., Kushtha Rogadhikara, 54/10-11)

Ingredients Used

Drug Name	Part Used	Proportion
Bhallataka	Fr.	1 Part
Chitraka	Rt.	1 Part
Snuhi	Rz.	1 Part
Arka	Lf.	1 Part
Gunja	Sd.	1 Part
Shunthi	Rz.	1 Part
Pippali	Fr.	1 Part
Maricha	Fr.	1 Part
Shankha Bhasma	—	1 Part
Tutha	—	1 Part
Kutha	Bk.	1 Part
Saindhava Lavana	—	1 Part
Vida Lavana	—	1 Part
Samudra Lavana	—	1 Part
Sauvarchala Lavana	—	1 Part
Audvida Lavana	—	1 Part
Sajji kshara	—	1 Part
Yava Kshara	—	1 Part
Languli		1 Part

Procedure:

1. Collect all the ingredients of Bhallatakadi Lepa.
2. Grind them into a fine powder and store it properly
3. Before applying it to the body, mix with the Arka kshira, Snuhi Kshira as the medium to create a soft paste.

Local Application: 20-30 gms + Snuhi Kshira 50 gms + Arka Kshira 50 gms.

Therapeutic Indications: Kushtha, Kilasa, Tila Kalaka, Chamkila, Arsha.

Pharmacological Actions

1. **Anti-inflammatory**: The combination of herbs and salts in the lepa formulation exhibits anti-inflammatory properties, reducing inflammation associated with skin disorders like Kuṣhtha and Kilasa.
2. **Analgesic**: The application of this lepa locally can help alleviate pain and discomfort associated with skin conditions like Tila Kalaka and Chamkila.
3. **Antimicrobial**: The ingredients in the lepa possess antimicrobial properties, which may help in preventing infections and promoting wound healing.
4. **Astringent**: Some components of the lepa formulation have astringent properties, which can help in tightening the skin and reducing secretions, beneficial in conditions like Arsha (hemorrhoids).

Research Updates

Sr.No.	Article Name	Author Name	Result
1.	A clinical trial on the efficacy of Bhallatakadi lepa In Charmakila W.S.R. Cutaneous warts	Lokendra Pahadiya, PG Final Year Scholar, Depart. of Shalya Tantra, NIA, Jaipur, Rajasthan, India.	Fifteen patients initially enrolled, but five dropped out. The remaining ten received Bhallatakadi lepa for one month with a two-month follow-up. Statistical analysis showed it ineffective in reducing wart number or size. Mild ASRs and LSRs were noted. The study suggests seasonal variations, potency, and market adulteration as factors contributing to drug inefficacy. A longitudinal study is advised for comprehensive analysis.

2.3.G Bhallatakadi Kvatha

Reference: B.R., Urustambha, Rogadhikara

भल्लातकामृताशुण्ठीदारुपथ्यापुनर्नवाः।
पञ्चमूलीद्वयोन्मिश्रा ऊरुस्तम्भनिबर्हणाः।।

(B.R., Urustambha Rogadhikara, 28/15)

Ingredients Used

Drug Name	Part Used	Proportion
Shuddha Bhallataka	Fr.	1 Part
Guduchi	St.	1 Part
Shunthi	Rz.	1 Part
Devadaru	Bk.	1 Part
Haritaki	P.	1 Part
Punarnava	Pl.	1 Part
Bilav	Rt.	1 Part
Aarni	Rt.	1 Part
Sonapatha	Rt.	1 Part
Patala	Rt.	1 Part
Gambhari	Rt.	1 Part
Shalaparni	Pl.	1 Part
Prishniparni	Pl.	1 Part
Brihati	Pl.	1 Part
Kanthakari	Pl.	1 Part

Drug Name	Part Used	Proportion
Gokshura	PL	1 Part
Water	—	16 Times and reduced upto ¼ th part

Procedure:

1. Obtain the necessary all the ingredients required for Bhallatakadi Kvatha. Ensure each ingredient is dried and cleaned properly.
2. Grind each ingredient separately into a coarse powder.
3. Mix all the coarse powders properly in a clean, dry container.
4. Add sixteen times the amount of water to the mixture of coarse powders.
5. Allow the mixture to soak in the water overnight.
6. The next morning, subject the mixture to mild heat. Continue heating until the liquid reduces to 1/4th of its original quantity.
7. Once reduced, filter the mixture through a clean cloth to remove the solid residues.
8. Collect the filtrate in a clean container. This filtrate is known as Bhallatakadi Kvatha.

Anupana: Water.

Therapeutic Indications: Urustambha Roga.

PHARMACODYNAMICS

1. **Anti-inflammatory Action**: The herbs like Guduchi, Punarnava, and Gokshura possess anti-inflammatory properties. They can inhibit the production of inflammatory mediators, thereby reducing inflammation associated with Urustambha Roga.
2. **Analgesic Action**: Some components of the formulation, such as Gokshura and Haritaki, may have analgesic properties. They can alleviate pain and discomfort in the thighs, characteristic of Urustambha Roga.
3. **Immunomodulatory Effects**: Guduchi is known for its immunomodulatory effects. By modulating the immune response, it can enhance the body's defense mechanisms, aiding in the management of Urustambha Roga.
4. **Muscle Relaxant Action**: Certain herbs like Punarnava and Gokshura possess muscle relaxant properties. They can help relax the muscles in the thighs, reducing stiffness and promoting mobility.

PHARMACOKINETICS

1. **Absorption**: The active constituents of the herbs in the formulation are typically absorbed in the gastrointestinal tract. The extent and rate of absorption may vary depending on factors such as the solubility and bioavailability of the phytochemicals.
2. **Distribution**: Once absorbed, the phytoconstituents are distributed throughout the body via the bloodstream. They may reach target tissues in the thighs and exert their therapeutic effects.
3. **Metabolism**: The metabolism of the phytochemicals occurs primarily in the liver. They undergo various biotransformation processes, which may involve oxidation, reduction, hydrolysis, or conjugation reactions.
4. **Elimination**: Metabolites of the phytochemicals are eliminated from the body primarily through renal excretion or fecal elimination. The half-life and duration of action of the active compounds may vary, influencing the dosing frequency and duration of treatment.

RESEARCH UPDATES : No Data Found.

2.3.H TOXICITY STUDY AND ITS MANAGEMENT:

Semecarpus anacardium, known as Bhallataka, is classified as a Sthavara Vanaspatika Upavisha (irritant organic vegetable poison) in various Ayurvedic texts. Its synonyms, Shophahetu, Shophakrita, and Vranakrita, indicate its potential to cause inflammation and ulceration. Bhallataka possesses Laghu (light), Ruksha (dry), and hot properties, akin to poison.

It is recommended that Bhallataka undergo purification (shodhana) before administration to patients. Bhallataka (Semecarpus anacardium Linn.) is listed among poisonous substances in Ayurvedic, Siddha, and Unani systems of medicine. Shodhana is a purification method used in Ayurveda to cleanse poisonous medicinal plants, metals, minerals, etc. This process removes unwanted impurities.

Semecarpus anacardium nuts can be safely taken orally with milk, ghee, or peanut oil, as these methods prevent toxic effects and instead yield anabolic benefits. To achieve therapeutic effects without toxicity, it is essential to closely follow the traditional methods recommended in Ayurveda and Siddha.

TOXIC PART

- **Fruit**
  - **Colour:** Hard, black rind with brownish, oily juice known as Bhallataka oil inside.

- **Weight**: 1.5 to 3.5 grams.
- **Oil**: Brownish and oily.

❖ **Medicinal Dose**

- **Kalka**: 3-6 grams.
- **Taila**: 10-20 drops.

Fatal Dose: 5-10 grams of pulpy juice or 140-150 grains.

Fatal Period: 12-24 hours.

Clinical Manifestations of Bhallataka Poisoning

1. Oral Ingestion:

- ❖ Excessive salivation, nausea, and vomiting.
- ❖ Formation of blackish blisters containing acrid serum.
- ❖ Burning sensation in the mouth, throat, chest, and upper abdomen.
- ❖ Increased thirst, decreased urine output, or absence of urine.
- ❖ Abdominal pain and cramps throughout the abdomen.
- ❖ Watery diarrhea, sometimes with blood and mucus.

2. Skin Contact:

- ❖ Eczematous eruptions accompanied by severe itching.
- ❖ Painful blackish blisters with acrid serum.
- ❖ Fever and painful urination with dark-colored urine.

In Ayurveda

In Charaka Samhita, contact with fruits or flowers of Bhallataka is mentioned as one of the causes of Agantuja shotha (inflammation due to external factors). Contact with the juice of Bhallataka can lead to severe burning sensation (Daha) and wound formation (Vrana). Direct contact with the face can result in acute burning sensation accompanied by swelling (Shotha) and skin eruptions (Visarpa). Some individuals may exhibit intolerance to Bhallataka, presenting symptoms such as dark urine, generalized itching, red patches on the skin blistering, diarrhea, fever, bloody urine, and even mental confusion (Unmada). Other symptoms may include reduced urine output (Oliguria), cloudy urine, itching around the anus and penis.

Shantyupaya/ Treatment:

1. For local application, a paste of sesame (Tila) rubbed with buffalo milk and mixed with butter, or a paste of licorice (Yashthimadhu) and sesame rubbed on a Sala leaf is recommended.
2. A paste of sesame with goat milk and butter or with black clay (Krishna Mritika) is used for treating inflammation caused by Bhallataka.
3. For quick relief from Bhallataka-induced inflammation, options include a mixture of Indian Elm (Mehnad) juice and butter, a mixture of cedar wood (Devadaru), mustard (Sarshapa), cypress grass (Nagaramotha), and clarified butter (Navanita), or a blend of clarified butter, sesame seeds, and sugar mixed with milk. Alternatively, a concoction of neem leaves (Neema), sesame seeds (Tila), and sesame oil (Tila Tail) boiled together and concentrated for local application can be used.

Rationale

The tarry oil found in the pericarp of the fruit is the main cause of irritation. This oil consists of 90% Anacardic acid, an oxyacid, and 10% Cardol, a higher non-volatile alcohol. Bhilawanol, a mixture of 3-n-pentadec(en)-ylcatechols, is the major component. Additionally, there are two incompletely identified phenols: semecarpol and anacardol. The corrosive juice from the pericarp contains catechol, fixed oil, and anacardol, which are responsible for its corrosive properties. In Bhallataka, Bhilawanol and Anacardic acids are the main constituents causing blisters, with Bhilawanol being known as Urushiol. When Urushiol comes into contact with the skin, it induces dermatitis. Traditional methods of shodhana (processing) of Bhallataka fruits have been found to reduce this irritation.

2.4 Gandhaka

References: The Ayurvedic Pharmacopoeia of India, Part 01, Volume 07, Pg. 9

Definition: Gandhaka is sulphur (S), a non-metallic solid element.

Synonyms

- ❖ **Sanskrita** : Bali, Daityendra, Gandha, Sugandhaka, Vali, Sugandhika
- ❖ **Assami** : Kibrit
- ❖ **Bangali** : Gandhaka
- ❖ **English** : Sulphur
- ❖ **Gujarati** : Gandhaka
- ❖ **Hindi** : Gandhaka
- ❖ **Kannada** : Gandaga
- ❖ **Malayalam** : Gandagam
- ❖ **Marathi** : Gandhaka
- ❖ **Punjabi** : Gandhaka
- ❖ **Tamil** : Kandagam, Kantakam (S.F.I.)
- ❖ **Telugu** : Gandhakam
- ❖ **Urdu** : Kibreet (Gandhak) (N.F.U.M.)

Broad Classification: Native element.

Origin and occurrence: Native Gandhaka is found in the craters and crevices of extinct volcanoes, where it forms as a direct sublimation product from volcanic gases. It is also present around thermal springs, in cap-rocks of salt domes, and within sedimentary sequences containing sulfates and organic materials like bituminous limestone. Gandhaka is often associated with gypsum and limestone. To purify native Gandhaka, which may be contaminated with sand, clay, bitumen, or other foreign matter, it is melted in ovens or distilled in closed vessels.

In India, Gandhaka deposits are limited, with the only known occurrence being at Tsokar Lake in the Leh district of Jammu and Kashmir. Mining for Gandhaka does not take place in India. However, elemental Gandhaka is commercially recovered as a by-product from fertilizer plants in Panipat (Haryana), Naya Nangal, and Bhatinda (Punjab), as well as from the oil refinery in Mathura (Uttar Pradesh). Large deposits of elemental Gandhaka are found underground in various parts of the world, particularly in Poland, Mexico, and the USA.

Physical Properties

- **Nature** : Crystalline lumps
- **Colour** : Sulphur yellow
- **Streak** : Yellowish white
- **Cleavage** : Poor
- **Fracture** : Conchoidal
- **Lustre** : Resinous
- **Tenacity** : Brittle
- **Transparency** : Translucent
- **Hardness** : 1.5 to 2.5
- **Sp. Gr.** : 1.95 to 2.10

Chemical Properties

- **Effect of Heat**: On burning a small quantity in a crucible, Gandhaka partially melts with evolution of brownish sulphur fumes.

  Gandhaka melts at about 1100 where as it burns at 2700 in air with a bluish flame yielding sulphur-di-oxide (SO_2).
- **Solubility**: Insoluble in water as well as any acid, but soluble in carbon-disulphide.
- **Assay**: Should contain not less than 90% Sulphur, when analysed by Gravimetric method (Appendix-3.1.8).
- **Heavy metals and Arsenic**: Should not contain more than the stated limits for the following: Arsenic = 1 ppm and Cadmium = 2 ppm (Appendix-3.2).
- **Shodhana**: Shall not be used in formulations without subjecting it to shodhana.

Shodhana

Ref: Rasamrita-2/3

गव्ये पयसि गन्धं तु भृङ्गराजरसेऽथवा।
रसपर्णटिकाप्रोक्तविधानेन विशोधयेत्।। (Rasamrita, 2/3)

1. Gandhaka : 1 part
2. Go-dugdha or

Bhringaraja rasa (Pl.): Q.S.

Method

Take fine powder of Gandhaka in a ladle, add little amount of ghrita, melt and pour in to the vessel which contains go-dugdha or bhringaraja svarasa. Collect on cooling to room temperature, wash with plenty of luke warm water, dry, prepare the fine powder and preserve for further purpose.

Gandhaka has the following attributes

Properties and Actions:

- **Rasa** : Madhura, Katu, Tikta, Kashaya
- **Guna** : Ushna, Sara, Snigdha
- **Virya** : Ushna
- **Vipaka** : Katu
- **Karma** : Rasayana, Dapiana, Pachana, Vatahara, Kaphahara Balya, Medhya, Pittala, Chakshushya, Krimihara, Sutajit, Kushthahara, Amadoshahara, Sutendraviryaprada.

Therapeutic Uses of Shuddha Gandhaka: Kandu (itching); Kushtha (diseases of the skin); Visarpa (erysepales); Dadru (taeniasis); Amavata (rheumatism); Kapha roga (disease due to kapha dosha); Garavisha (slow/accumulated poison); Pliha roga (splenic disease); Kshaya (pthisis); Kasa (cough); Shvasa (Asthma); Netra roga (diseases of eyes); Vata roga (diseases due to Vata dosha).

Dose: 125 mg - 1 g of Shuddha Gandhaka.

Important Formulations: Chandrakala rasa, Rasa parpati, Gandhaka rasayana.

2.4.A Gandhaka Churna

Reference: Shasrayoga, Churna Prakarana

काकमाची भृंगरसे सप्तकृत्वास्सुभावितम्।
गंधकं सूतसहितं आतपे शोषयेत्पुनः।।
वाकुची चूर्ण संयुक्तं मात्रयाद्य सुयंत्रितः।
क्षीरान्नाशी जयेत्कुष्ठानष्टादशविधान् क्षणात्।।

(Sahasrayoga, Churna Prakarana, p. 151)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Shuddha Gandhaka	—	1 Part
Shuddha Parada	—	1 Part
Kakamachi Svarasa	(Pl.)	QS
Bhringaraja Svarasa	(Pl.)	QS
Bakuchi Svarasa	(Sd.)	2 Parts

Procedure:

1. First of all, take Shuddha Gandhaka and make it into fine powder.
2. Triturate this powder with Bhringaraja Svarasa and Kakamachi Svarasa for 7 days.
3. After this, add equal quantity of Shuddha Parada and triturate it properly to make Kajjali.
4. Make seven more trituration process with the same juice and dry the mixture.
5. Now add equal quantity of Bakuchi powder to this mixture and knead it well with the juices mentioned above.
6. Make this mixture into 500 mg size tablets and dry them.

Dose: 500 mg.

Anupana: Kshira.

Action: Kaphahara.

Indication: Sarva Prakara Kushtha.

PHARMACODYNAMICS

1. **Antifungal and Antibacterial:** Gandhaka Churna, containing purified sulphur (Shuddha Gandhaka) and purified mercury (Shuddha Parada), exhibits potent antimicrobial properties. It can inhibit the growth of various fungi and bacteria, making it beneficial for treating skin infections associated with different types of Kushtha.
2. **Anti-inflammatory:** The combination of Kakamachi Svarasa, Bhringaraja Svarasa, and Bakuchi Svarasa helps in reducing inflammation. This property is particularly useful in alleviating symptoms like redness, swelling, and itching associated with different types of skin disorders.
3. **Kaphahara (Pacifying Kapha Dosha):** Gandhaka Churna has a drying effect, attributed to the presence of sulphur and mercury. This drying action helps in reducing excess moisture and oiliness on the skin, thus benefiting conditions where Kapha dosha aggravation is involved.

PHARMACOKINETICS

1. **Absorption:** The active constituents of Gandhaka Churna are typically absorbed in the gastrointestinal tract. Sulphur and mercury compounds may undergo absorption through passive diffusion or active transport mechanisms.
2. **Distribution:** Once absorbed, the constituents are distributed throughout the body via the bloodstream. They may reach target tissues in the skin, exerting their therapeutic effects on various skin disorders.
3. **Metabolism:** Sulphur and mercury compounds may undergo metabolic transformations in the liver. However, the metabolism of these elements in the body is complex and depends on various factors, including chemical form and route of administration.
4. **Elimination:** Metabolites of sulphur and mercury may be excreted from the body primarily through urine and feces. However, the elimination of these heavy metals is relatively slow and may lead to their accumulation in the body if not properly metabolized and excreted.

RESEARCH UPDATES : No Data Found.

2.4.B GANDHAKA RASAYANA

Reference: AFI, Part II, Page 115

शुद्धो वलिर्गोपयसा विभाव्यस्ततश्चतुर्जातगुडूचिकाभिः।
पथ्याक्षधात्र्यौषध भृंगराजैर्भाव्योऽष्टवारं पृथगार्द्रकेण।।
शुद्धे सितां योजय तुल्यभागां रसायनं गन्धकराजसंज्ञम्।
कर्षोन्मितं सेवितमेति मर्त्यो वीर्यं च पुष्टिं दृढदेहवह्निम्।।
कण्डुं च कुष्ठं विषदोषमुग्रं मासद्वयेनेह जयेत्प्रयोगः।
घोरातिसारं ग्रहणीपदं च हरेच्च रक्तं दृढशूलयुक्तम्।।
जीर्णज्वरे मेहगणे प्रकृष्टं वातामयानां हरणे समर्थम्।
प्रजाकरं केशमतीव कृष्णं करोति चेद्भक्षति चार्धवर्षम्।।

(Y.R. Rasayan, 1-4)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Shuddha Gandhaka	—	1 Part
Go-Dugdha	—	Q.S. Bhavana for 8 times
Tvaka Kvatha	St. Bk.	Q.S. Bhavana for 8 times
Ela Kvatha	Sd.	Q.S. Bhavana for 8 times
Tejpatra Kvatha	Lf.	Q.S. Bhavana for 8 times
Nagakesara Kvatha	Adr.	Q.S. Bhavana for 8 times
Guduchi Kvatha	St.	Q.S. Bhavana for 8 times
Pathya Kvatha	Fr. P.	Q.S. Bhavana for 8 times
Bibhitaki Kvatha	Fr. P.	Q.S. Bhavana for 8 times
Amalaki Kvatha	Fr. P.	Q.S. Bhavana for 8 times
Sunthi Kvatha	Rz.	Q.S. Bhavana for 8 times
Bhrngaraja Svarasa	Pl.	Q.S. Bhavana for 8 times
Ardraka Svarasa	Rz.	Q.S. Bhavana for 8 times
Sita	—	Q.S. Bhavana for 8 times

Procedure:

1. Prepare the decoctions (Kvatha) of Tvaka, Ela, Tejapatra, Nagakesara, Guduchi, Pathya, Bibhitaki, Amalaki, and Shunthi separately each according to their mardana time.
2. Prepare the fresh juices (Svarasa) of Bhringaraja and Ardraka.
3. Take 1 part of Shuddha Gandhaka and place it in a clean, dry mortar (Khalva Yantra).
4. Add sufficient quantity (Q.S.) of Go Dugdha (Cow's Milk) and triturate the mixture until it become dry, repeating for 8 Bhavanas.
5. Add Tvaka Kvatha and triturate for 8 Bhavanas and repeat with Ela Kvatha, Tejpatra Kvatha, Nagakesara Kvatha, Guduchi Kvatha, Pathya Kvatha, Bibhitaki Kvatha, Amalaki Kvatha, and Shunthi Kvatha, performing 8 Bhavanas each.
6. Continue with Bhringaraja Svarasa and Ardraka Svarasa, performing 8 Bhavanas each.
7. Finally, add Sita (Sugar) and perform 8 Bhavanas.
8. Roll the mass into small, uniform tablets.
9. Place the tablets on a clean tray and expose them to sunlight until completely dry.
10. Store the fully dried tablets in sterilized, airtight glass containers.

Dose: 1 – 3 gms.

Therapeutic Indications: Kandu, Kushtha, Visavikara, Viryakshaya, Agnimandya, Atisara, Grahani, Shula, Jirnajvara, Meha.

PHARMACODYNAMICS

1. **Rasayana (Rejuvenating)**: Gandhaka Rasayana is a potent rejuvenating formulation known for its ability to enhance vitality and promote overall well-being. It contains purified sulphur (Shuddha Gandhaka), which acts as a Rasayana, nourishing the body tissues and enhancing their functions.
2. **Immunomodulatory**: The combination of various herbal decoctions and juices like Tvaka, Ela, Tejpatra, Nagakesara, Guduchi, Pathya, Bibhitaki, Amalaki, Shunthi, Bhringaraja, and Adaraka helps in modulating the immune response of the body. This immunomodulatory action strengthens the body's defense mechanism against various infections and diseases.
3. **Antimicrobial**: Gandhaka Rasayana exhibits antimicrobial properties attributed to the presence of Shuddha Gandhaka. It helps in combating microbial infections associated with skin disorders like Kandu (itching) and Kushtha (skin diseases).
4. **Antioxidant**: The herbal ingredients in Gandhaka Rasayana possess antioxidant properties, which help in scavenging free radicals and reducing oxidative stress. This antioxidant activity contributes to the overall health benefits of the formulation.

PHARMACOKINETICS

1. **Absorption**: The active constituents of Gandhaka Rasayana are typically absorbed in the gastrointestinal tract. The herbal decoctions and juices present in the formulation facilitate the absorption of nutrients and bioactive compounds.
2. **Distribution**: Once absorbed, the constituents are distributed throughout the body via the bloodstream. They reach target tissues and organs, exerting their rejuvenating and therapeutic effects.
3. **Metabolism**: The metabolism of the active ingredients in Gandhaka Rasayana may occur primarily in the liver. Metabolites are formed, which may undergo further transformations before being eliminated from the body.
4. **Elimination**: Metabolites and unutilized constituents are excreted from the body primarily through urine and feces. The elimination process helps in maintaining the body's homeostasis and preventing the accumulation of toxins.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Pharmaceutico-Analytical Study of Gandhaka Rasayana	M.V.R. Wijayanthamala, PG Scholar, Dept. of Rasa Shastra Bhaishajya Kalpana, National Institute of Ayurveda, Jaipur (Raj.), India	Results show the weight of GR increased after 88 Bhavana, aligning with the liquid's solid content. Low moisture content (4.67%) suggests enhanced stability and shelf life. Low Acid Insoluble Ash indicates minimal dirt. High water and alcohol soluble extractives (62.18% and 63.12%) confirm abundant active principles. Heavy metals and microbial analyses met safety standards. HPTLC values confirm diverse active principles.

Sr.No.	Article Name	Author Name	Result
2.	A Review on Probable Mode of Action of Gandhaka Rasayana—An Ayurvedic Herbo - Mineral Formulation with Multifaceted Action.	Madduru Muni Haritha, First Year PG Scholar, Dept. of Rasashastra and Bhaishajya Kalpana, KLE Shri BMK Ayurved Mahavidyalaya, Shahapur, Belagavi, Karnataka, India	Gandhaka Rasayana is effective in alleviating symptoms of diseases related to Pitta, Kapha, and Rakta doshas. It possesses excellent Rasayana properties, promoting regeneration in the body and aiding in chronic diseases. Its benefits include Raktaprasadana (purification of blood), Kledaghna (removing excess moisture), Krimihara (anti-parasitic), Vishaghna (antidote to toxins), Kushthaghna (skin disorders), Amapachana (digestive aid), and Agnideepana (improving digestion), contributing to overall health maintenance.
3.	A Randomised Controlled Trial to Evaluate the Effect of Gandhaka Rasayana Rectal Suppository in Post Operative Pain Management in Ano-Rectal Disorders	Ranjani Deshpande, Consultant Ayurveda Surgeon, Sritulasi Ayurvedalaya, Bengaluru, Karnataka, India	In a study of 40 patients, Group A received Gandhaka Rasayana rectal suppositories while Group B received Diclofenac Sodium suppositories post-operatively for 5 days. Group A showed 85% improvement, Group B 80.39%. Gandhaka Rasayana, with Tridoshashamaka properties, was finely prepared for optimal absorption and exhibited significant pain relief in ano-rectal disorders.
4.	Screening of Antibacterial and antifungal activity of Gandhaka rasayana—an Ayurvedic formulation	Reshma M. Saokar, Assistant Professor, Department of Rasashastra and BK, SDM College of Ayurveda, Hassan, Karnataka, India.	Gandhaka Rasayana solutions inhibited bacteria (22-30 mm) and fungi (16-25 mm) significantly compared to Fluconazole and control. Its composition includes Fe, Cu, Ni, Zn, Ca, Na, As, triclinic cells, carbohydrates, steroids, and tannins, suggesting immunity enhancement. Gandhaka Rasayana displayed stronger antibacterial activity than antifungal.

2.4.c Gandhaka Druti

Reference: Rasaratna Sammuchchya 3rd Chapter

कलांशव्योषसंयुक्तं गन्धकंश्लक्ष्णचूर्णितम्।
अरत्निमात्रे वस्त्रे तद्विप्रकीर्यं विवेष्टय तत्।।
सूत्रेण वेष्टयित्वाऽथ यामं तैले निमज्जयेत्।
धृत्वा संदंशतो वर्तिमध्यं प्रज्ज्वालयेच्च तम्।।
दुतो निपतितो गन्धो बिन्दुशः काचभाजने।
तां दुतिं प्रक्षिपेत्पत्रे नागवल्यास्त्रिबिन्दुकाम्।।
वल्लेन प्रमितं स्वच्छं सूतेन्दं च विमर्दयेत्।
अङ्गुल्याऽथ सपत्रां तां दुतिं सूतं च भक्षयेत्।।
करोति दीपनं तीव्रं क्षयं पाण्डुं च नाशयेत्।
कासं श्वासं च शूलार्तिं ग्रहणीमतिदुर्धराम्।
आमं विनाशयत्याशु लघुत्वं प्रकरोति च।।

(Rasaratna Samuchchaya, 3/27-31)

Ingredients Used

Drug Name	Part Used	Proportion
Gandhaka	—	1 Part
Trikatu Churna	—	1/16th Part
Tila Taila	—	Q.S.

Procedure:

1. Collect all the ingredients of Gandhaka Druti.
2. Take Shuddha Gandhaka, Trikatu dravyas and make it into a fine powder.
3. Place a piece of cloth on a flat surface.
4. Spread the Shuddha Gandhaka Churna and Trikatu Churna evenly over the cloth.
5. Roll the cloth like a wick and tie the whole roll with thread.
6. Dip this wick into a vessel filled with Tila Taila for 3 hours.
7. After 3 hours, pick up the wick with a holder and light it with a matchstick.
8. As the wick burns, Gandhaka will melt and drop down in the form of oil.
9. Collect the oil and preserved in a glass container.

Dose: 3 Drops

Anupana: Nagavalli Parta Churna, Shuddha Parada

Therapeutic Indications: Agnimandya, Aruchi, Kshaya, Pandu Roga, Kasa, Shvasa, Shula, Amaatisara.

Pharmacodynamics

1. **Dipana (Appetizer):** Gandhaka Druti acts as a potent dipana, stimulating the digestive fire (agni) and improving appetite. This action helps in enhancing the digestion and assimilation of nutrients from food.
2. **Tikshna:** The formulation contains Gandhaka (sulphur) and Trikatu Churna (a combination of dried ginger, black pepper, and long pepper), which impart sharpness to the preparation. This sharpness aids in digesting ama (toxins) and alleviating symptoms of indigestion.
3. **Rasayana (Rejuvenating):** Gandhaka Druti may possess rasayana properties, contributing to the rejuvenation and revitalization of the body. It helps in promoting overall health and well-being.

4. **Vata-Kaphahara**: The formulation's tikshna (sharp) nature helps in pacifying aggravated Vata and Kapha doshas, thereby providing relief from conditions associated with their imbalance, such as respiratory disorders, digestive issues, and general weakness.

Pharmacokinetics

1. **Absorption**: When administered orally or topically, Gandhaka Druti is absorbed through the mucous membranes or the skin. The active constituents enter the bloodstream and reach their target tissues.
2. **Distribution**: The active ingredients of Gandhaka Druti are distributed throughout the body, exerting their therapeutic effects on various organs and systems.
3. **Metabolism**: Metabolism of Gandhaka Druti may occur primarily in the liver, where the active constituents are biotransformed into metabolites. These metabolites may then undergo further transformations or be eliminated from the body.
4. **Elimination**: Metabolites and unutilized constituents of Gandhaka Druti are eliminated from the body primarily through urine and feces. The elimination process helps in maintaining the body's equilibrium and preventing the accumulation of toxins.

Research Updates

Sr.No.	Article Name	Author Name	Result
1.	Pharmaceutical Study on Gandhaka Druti: A Review Article	Dr. Aabha Pandey, Final Year, PG Scholar, S.J.G. Ayurveda Medical College, Koppal, Karnataka.	The concept of Druti extends beyond simply liquefying metals/minerals; it has various implications. Different procedures and drugs led to diverse preparation methods. This medicine enhances appetite and treats conditions like kshaya roga, pandu roga, kasa, shvasa, shula, grahani roga, and ama dosha. It promotes body lightness.
2.	Review on *Druti Kalpana* with Special Reference to *Gandhaka Druti*	Dr. Dev Raj Kshetri, PG Agnivesh Boys' Hostel, Jorawarsingh Gate, Amer Road, Jaipur - 302 002, Rajasthan, India.	A detailed review of classical Rasashastra literature on Druti Kalpanas and Gandhaka Druti has been conducted. Druti formulations for Mercury fixation are more numerous than those for clinical use. Gandhaka Druti holds significance in Parada samskara and treating skin diseases, along with Rasayana purposes. The study also analyzed various methods in classical texts for preparing Gandhaka Druti. These variations in preparation methods may align with their uses in different ailments and Mercury processing.
3.	Formulation and Development of Gandhaka Druti Cream	Dr. Dev Raj Kshetri, PG Agnivesh Boys' Hostel, Jorawarsingh Gate, Amer Road, Jaipur - 302 002, Rajasthan, India.	An average of 52.67 ml Gandhaka Druti was made from 50 gm purified Gandhaka and 3.125 gm Trikatu Churna. Three 1000 gm batches of Gandhaka Druti cream were prepared. Gandhaka Druti Cream, a modified form, was successfully developed. Further studies are needed for its physico-chemical properties and therapeutic efficacy in skin diseases.

2.4.D Gandhaka Taila

Reference: Rasa Tarangini, 8th Chapter

आवर्तमाने पयसि क्षिपेद्वै विशुद्ध सौगन्धिकजं हि चूर्णम्।
तदुद्भवक्षीरसमुत्थमाज्यं गन्धस्य तैलं वितरेत्प्रतप्तम्।।
सुगन्धतैलं विनिहन्ति शीघ्रं क्षुद्राणि कुष्ठानि विशेषतो वै।
हरेद्विसर्पादिकरोगसङ्घं विलेपनाद्वाऽशनत: प्रकामम्।।

(Rasa Tarangini, 8/94-95)

Ingredients Used

Drug Name	Part Used	Proportion
Shuddha Gandhaka	—	1 Part
Go Dugdha	—	Q.S.

Procedure:

1. Collect cow milk and bring it to a boil.
2. While boiling, add the powder of Shuddha Gandhaka to the milk.
3. Allow the milk to cool.
4. Once cooled, churn the milk to form butter.
5. Place the butter in a vessel.
6. Heat the butter on a fire to produce Taila (oil).

Dose: External Use Only.

Therapeutic Indications: Kushtha, Kshudra, Visarpa, Rakta Dushti Janaya Vyadhi.

Pharmacodynamics

1. **Kushtha**: Gandhaka Taila is effective in managing various skin disorders like eczema, psoriasis, and dermatitis due to its potent antibacterial, antifungal, and anti-inflammatory properties. It helps in reducing itching, inflammation, and skin redness.
2. **Kshudra**: Gandhaka Taila is beneficial in treating minor ailments of the skin, including rashes, minor cuts, wounds, and abrasions. Its application helps

in promoting wound healing and preventing secondary infections.

3. **Visarpa**: Gandhaka Taila is indicated in the management of visarpa, which is characterized by redness, swelling, and severe pain in the affected area. The antimicrobial properties of Gandhaka Taila help in combating the causative organisms and reducing inflammation.
4. **Rakta Dushti Janya**: This formulation acts as a blood purifier, helping to eliminate toxins from the blood. Regular application of Gandhaka Taila on the skin helps in detoxifying the blood and improving overall skin health.

PHARMACOKINETICS

1. **Absorption**: When applied topically, Gandhaka Taila is absorbed through the skin layers. The active constituents penetrate the epidermis and dermis, reaching the underlying tissues.
2. **Distribution**: The active ingredients of Gandhaka Taila are distributed evenly across the affected skin area. They exert their therapeutic effects locally and may also be absorbed systemically to some extent.
3. **Metabolism**: Metabolism of Gandhaka Taila may occur locally in the skin tissues, where the active constituents undergo biotransformation processes. Metabolites may be formed, which contribute to the therapeutic actions of the formulation.
4. **Elimination**: Metabolites of Gandhaka Taila, along with any unabsorbed residues, may be eliminated from the body through the normal routes of excretion, such as sweat glands and sebaceous glands. This elimination process helps in maintaining skin health and integrity.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Preparation of Gandhaka Taila by Patalayantra method and Pharmaceutico-analytical Study of Gandhaka Taila cream	Sachin S. Sheth, Assistant Professor, Dept. of Rasashastra and Bhaishajya Kalpana, APM's Ayurved Mahavidyalaya, Sion, Mumbai, Maharashtra, India.	The cream's analytical values align with the established norms found in Gandhaka Taila literature, known for its efficacy against skin diseases. Oil is vital for skin structure, while hydration requires both oil and water. This cream aims to offer an oil alternative, proven safe for external use.
2.	Antimicrobial Study of Gandhaka Taila: An Ayurvedic Wound Healer on Staphylococcus Aureus, Escherichia Coli and Candida Albicans	Himsiksha Verma, V.Y.D.S. Ayurved Mahavidyalaya, Dharpa Khurja, Distt. Bulandshahar, U.P., India	Gandhaka Taila, a herbo-mineral preparation for skin diseases, has two types described in Rasa literature. Both types, made following distinct methods, showed antimicrobial effects against Staphylococcus aureus, Escherichia coli, and Candida albicans. This confirms the efficacy of Gandhaka Taila as an antimicrobial oil.
3.	Pharmaceutico-Analytical Study of Gandhaka Taila	Kotrannavar V.S, Depart. of Rasashastra, K.L.E.University's Shri B.M.K. Ayurveda Mahavidyalaya, Shahapur, Belgaum-590003, Karnataka, India.	Gandhaka Taila analysis reveals inorganic elements: Ca, Mg, Fe, and S as sulphide. Other properties include: TLC Rf value of 0.58, HPTLC with 3 peaks, alkaline pH (7.74), low moisture (0.13%), Sp. gravity of 1.043, Total Ash value at 0.125%, Refractive index of 1.468, Saponification value of 46.28, Iodine value at 4.69, and Fat content of 95.83%.
4.	Effect of Gandhaka Taila on Pama (Scabies)	Kottanavar SS KAHER's, Shree BMK Ayurveda Mahavidyalaya and Research Centre Belagavi, Karnataka	In the clinical study observed that majority (75%) of patients where use of Gandhaka taila as external application in Pama markedly reduced itching, lesions, oozing and burning sensation.

2.4.E GANDHAKADYA MALAHARA

Reference: AFI, Part II, Page 165, R.T. 8/63-65

सिक्थतैलं सुविमलं रसतोलकसम्मितम्।
गन्धकं गिरिसिन्दूरं तोलकार्द्धमितं पृथक्।।
टङ्कणं घनसारं च पृथक् माषद्वयोन्मितम्।
दत्वा सम्मेल्य यत्नेन काचकुप्यां निधापयेत्।।
मतो मलहरोऽयं तु गन्धकाद्य समाह्वयः।
विनाशयत्याशु भृशं पामामत्यर्थदारुणाम्।। (R.T., 8/63-65)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Siktha Taila	—	72 gms
Shuddha Gandhaka	—	6 gms
Girisindura	—	6 gms
Shuddha Tankana	—	2 gms
Karpura	—	2 gms

Procedure:

Collect all the ingredients of Gandhakadya Malahara. All the ingredients except Siktha Taila should be taken in a mortar and ground well. Then, Siktha Taila should be mixed in thoroughly and ground continuously for some hours. This mixture is known as Gandhakadya Malahara and should be preserved in a glass container.

Dose: External Used.

Therapeutic Indications: Pama.

PHARMACODYNAMICS

1. **Antibacterial and Antifungal:** Gandhakadya Malahara possesses potent antibacterial and antifungal properties due to the presence of Shuddha Gandhaka and Girisindura. It helps in inhibiting the growth of bacteria and fungi on the skin, thereby preventing infections.
2. **Anti-inflammatory:** The formulation exhibits anti-inflammatory effects, reducing redness, swelling, and pain associated with skin conditions. This property aids in soothing irritated skin and promoting healing.
3. **Astringent:** Gandhakadya Malahara acts as an astringent, helping to tighten and tone the skin. It helps in reducing excessive oiliness and improving skin texture.
4. **Healing:** The combination of ingredients in Gandhakadya Malahara promotes wound healing by accelerating the regeneration of skin cells. It helps in the formation of healthy granulation tissue and speeds up the closure of wounds.

PHARMACOKINETICS

1. **Absorption:** When applied topically, Gandhakadya Malahara is absorbed through the skin layers. The active constituents penetrate the epidermis and dermis, reaching the underlying tissues.
2. **Distribution:** The active ingredients of Gandhakadya Malahara are distributed evenly across the affected skin area. They exert their therapeutic effects locally and may also be absorbed systemically to some extent.
3. **Metabolism:** Metabolism of Gandhakadya Malahara may occur locally in the skin tissues, where the active constituents undergo biotransformation processes. Metabolites may be formed, which contribute to the therapeutic actions of the formulation.
4. **Elimination:** Metabolites of Gandhakadya Malahara, along with any unabsorbed residues, may be eliminated from the body through the normal routes of excretion, such as sweat glands and sebaceous glands. This elimination process helps in maintaining skin health and integrity.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	A critical review on Gandhakadya malahara	Dr. K C Leena, Professor, Dept. of Rasashastra and Bhaishajya Kalpana, Govt. Ayurveda College, Pariyaram, Kannur, Pin-670 503, Kerala, India	Malahara, with properties of snehana (unctuousness), ropana (healing), lekhana (scrapping), and varnya (colouring), varies based on its ingredients. Gandhakadya Malahara, mentioned in Rasatarangini, includes Siktha taila as a base with Shuddha Gandhaka, Shuddha Girisindura, and Shuddha Tankana. This herbo-mineral formulation is for external use in dermatological issues, particularly severe Pama, as per Rasatarangini.
2.	Antimicrobial activity of Gandhakadya Malahara in vitro study	Nighil Gigi, Post Graduate Scholar, Dept. of Rasa Shastra and Bhaishajya Kalpana, Ramakrishna Ayurvedic Medical College, Hospital and Research Centre, Bengaluru, Karnataka, India	Gandhakadya Malahara from Rasatarangini combines five ingredients, prepared according to classical references. Analytical results: P-Anisidine value 8.497 mEq/kg, Peroxide value 5.55 mEq/kg, Viscosity Index 1.18, pH 6.45, and fatty matter 19.6. Antimicrobial study showed effectiveness against P. mirabilis and P. acne, attributed to its Tvak Vikaras (skin disorders) properties. This makes Gandhakadya Malahara a known antimicrobial agent.
3.	Effect of Gandhaka Malahara on Padadari: A Case Study	Dr. Nirmala Chandrabhanji Apaturkar, Lecturer (Rachana Sharir) at Bhausaheb Mulak Ayu College, Nandanwan, Nagpur, MHA.	Ayurveda offers various treatments for Padadari, including internal medications, external applications, and padabhyanga. Many herbs with excellent Vranaropaka (healing) properties are described. Drawing from this knowledge, local application of Gandhaka Malahara has shown promising results for Padadari. It proves to be highly effective, safe, readily available, affordable, and one of the best treatments for Padadari.

2.4. f Gandhakadi Lepa

Reference: RRS, Siroroga Chikitsa

गन्धकं सूतकं तुल्यमर्कक्षीरेण सैन्धवम्।
पिष्ट्वा च काञ्चनीमूलं लेपोऽयं गण्डमालिकाम्।।

(RRS, Siroroga Chikitsa, 68)

Ingredients Used

Drug Name	Part Used	Proportion
Shuddha Gandhaka	—	1 Part
Shuddha Parada	—	1 Part
Saindhava Lavana	—	1 Part
Kachanara	Rt.	1 Part
Arka	Latex	Q.S. For Application

Procedure:

1. Collect all the ingredients of Gandhakadi Lepa.
2. Grind them into a fine powder and store it properly.
3. Before applying it to the body, mix with the Arka kshira as the medium to create a soft paste.

Dose: External Use Only.

Therapeutic Indications: Gandamala Varna

Pharmacodynamics

1. **Antibacterial and Antifungal:** Gandhakadi Lepa possesses antibacterial and antifungal properties due to the presence of Shuddha Gandhaka. It helps in inhibiting the growth of bacteria and fungi on the skin, thereby preventing infections associated with Gandamala (skin disorders).
2. **Anti-inflammatory:** The formulation exhibits anti-inflammatory effects, reducing redness, swelling, and pain associated with Gandamala. This property aids in soothing irritated skin and promoting healing.
3. **Astringent:** Gandhakadi Lepa acts as an astringent, helping to tighten and tone the skin. It assists in reducing inflammation and improving the appearance of skin affected by Gandamala.
4. **Healing:** The combination of ingredients promotes wound healing by accelerating the regeneration of skin cells. It helps in the formation of healthy granulation tissue and speeds up the closure of wounds associated with Gandamala.

Pharmacokinetics

1. **Absorption:** When applied externally, Gandhakadi Lepa is absorbed through the skin layers. The active constituents penetrate the epidermis and dermis, reaching the underlying tissues affected by Gandamala.
2. **Distribution:** The active ingredients of Gandhakadi Lepa are distributed evenly across the affected skin area. They exert their therapeutic effects locally and may also be absorbed systemically to some extent.
3. **Metabolism:** Metabolism of Gandhakadi Lepa may occur locally in the skin tissues, where the active constituents undergo biotransformation processes. Metabolites may be formed, contributing to the therapeutic actions of the formulation.
4. **Elimination:** Metabolites of Gandhakadi Lepa, along with any unabsorbed residues, may be eliminated from the body through the normal routes of excretion, such as sweat glands and sebaceous glands. This elimination process helps in maintaining skin health and integrity.

Research Update

Sr.No.	Article Name	Author Name	Result
1.	A Review on A Clinical Study of Gandhakadi Lepa In Sidhma with Special Reference to Tinea Versicolor (Pityriasis Versicolor).	Dr. Sanjay A. Dhurve (M.D., Ph.D.) Assistant Professor, Department of Kayachikitsa, Bharati Vidyapeeth Deemed University College of Ayurved, Pune -Satara Road, Pune-411043, MHA	Acharya Charaka identified Sidhma as a type of Maha Kushtha, with symptoms resembling Tinea Versicolor. This study evaluated the efficacy of Gandhakadi Lepa in managing Sidhma, showing promising results in treating Tinea Versicolor.

2.4.g Gandhaka Vati

Reference: B.R., Agnimandya Rogadhikara

रसार्द्धं गन्धकं शुद्धं शुण्ठीचूर्णं च तत्समम्।
लवङ्गं मरिचं चापि प्रत्येकं तु पलं भवेत्।।
सैन्धवं त्रिपलं ग्राह्यं त्रिपलं च सुवर्चलम्।
चणकाम्लं पलद्वन्द्वं क्षारं मूलकजं तथा।।
मर्दयेन्निम्बुकद्रावैर्यामान् सप्त खरांशुभिः।
बदरप्रमाणमात्रा सर्वाजीर्णप्रणाशिनी।
चणकस्याम्लकाभावे चुक्रं देयं मनीषिभिः।।

(B.R., Agnimandya Rogadhikara, 10/242-244)

Ingredients Used

Drug Name	Part Used	Proportion
Shuddha Parada	—	46 gms
Shuddha Gandhaka	—	23 gms
Shunthi	Rz.	46 gms
Lavanga	Fr.	46 gms

Drug Name	Part Used	Proportion
Marica	Fr.	46 gms
Saindhava	—	140 gms
Sauvarchala	—	140 gms
Chanakamala	—	93 gms
Muli Kshara	—	93 gms
Nimbu Svarasa	Fr.	Bhavana for 7 Times

Procedure:

1. Gather all the required dried ingredients for Gandhaka Vati. Ensure each ingredient is clean and free from impurities.
2. Using a Khalva Yantra or a grinder, grind each ingredient separately into a fine powder.
3. Filter each powdered ingredient through a clean cloth to remove any coarse particles.
4. Combine all the filtered powders together in a clean, dry container. Mix thoroughly to ensure a uniform blend of all ingredients.
5. Filter the compound powder mixture once again through a clean cloth to ensure a fine consistency.
6. Adding Nimbu svarasa as bhavana for 7 times, until it becomes a concentrated form and suitable for making tablets or pills, then roll it into tablets or pills.
7. Expose the tray to sunlight or under hot air oven for several hours to days until the material is completely dry.
8. Once fully dried, collect the dried material. This final product is called Gandhaka Vati.
9. Store the Gandhaka Vati in a clean, dry, airtight container to preserve its potency and freshness.

Dose: 500 mg.

Anupana: Warm Water.

Therapeutic Indications: Ajirna, Mandagni.

PHARMACODYNAMICS

1. **Digestive Stimulant:** Gandhaka Vati acts as a digestive stimulant due to the presence of Shunthi (Ginger), Lavanga (Clove), and Marica (Black Pepper). These ingredients help in improving digestion stimulating the secretion of digestive enzymes a enhancing gastrointestinal motility.
2. **Carminative**: The combination of Shunthi, Lavang and Marica exhibits carminative properti relieving flatulence, bloating, and abdomin discomfort associated with digesti disturbances. They help in expelling gas from t gastrointestinal tract.
3. **Antacid**: Chanakamala and Muli Kshara act antacids, neutralizing excess stomach acid an providing relief from hyperacidity and heartbur This property helps in alleviating symptoms Ajirna (indigestion) caused by excessive gastric aci secretion.
4. **Agnikara**: Saindhava and Souvarchala enhanc digestive fire (Agni), promoting efficient digestio and metabolism. They play a crucial role i improving appetite and assimilation of nutrients.

PHARMACOKINETICS

1. **Absorption**: The active constituents of Gandhaka Vati are absorbed in the gastrointestinal trac following oral administration. The absorption may vary depending on factors such as the formulation matrix and individual physiological factors.
2. **Distribution**: Once absorbed, the active ingredients are distributed systemically through the bloodstream, reaching target tissues such as the stomach, intestines, and liver. They exert their therapeutic effects on the digestive system.
3. **Metabolism**: The metabolism of Gandhaka Vati may occur primarily in the liver, where certain constituents undergo biotransformation processes. Metabolites may be formed, which could contribute to the pharmacological actions of the formulation.
4. **Elimination**: Metabolites of Gandhaka Vati, along with any unabsorbed residues, are eliminated from the body primarily through renal excretion and fecal elimination. The duration of elimination may vary depending on the pharmacokinetic properties of individual ingredients.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	A review on Gandhak Vati : An Ayurvedic formulation in Patients of Agnimandya and Ajirna	Nakhat, Final Year Post Graduate Scholar, Dept. of Rasa Shastra & Bhaishajya Kalpana, National Institute of Ayurveda DE-NOVO, Jaipur, Rajasthan, India	Ajirna, a troublesome digestive disorder, often stems from Agnimandya, caused by poor dietary habits. Basic management includes Dipana, Pachana, and Langhana techniques, alongside internal medicines like Gandhaka Vati. Various ancient books list nine formulations of Gandhaka Vati, each with distinct ingredients and therapeutic benefits.

Sr.No.	Article Name	Author Name	Result
2.	Pharmacognostical and Pharmaceutical analysis of Gandhakadi Yoga Vati	Kalawana OTMRKSB, PG Scholar, Dept. of Kaumarbhritya, I.P.G.T.&R.A., Gujarat Ayurved University, Jamnagar, Gujarat-361008, India	The study aimed to analyze the pharmacognostical characteristics and physico-chemical parameters of Gandhakadi Yoga Vati, an Ayurvedic formulation used in treating Thalassemia Major. Microscopic analysis revealed features such as oil globules, stone cells, oleoresin contents, fibers, and warty trichomes with crystaline deposits. Physico-chemical parameters showed a loss on drying of 3.5% w/w, pH of 6.5, alcohol soluble extractive of 8.9% w/w, and water soluble extractive of 5.5% w/w High-Performance Thin-Layer Chromatography (HPTLC) indicated six peaks at 254 nm and three peaks at 366 nm wavelengths.
3.	Pharmacognostical and analytical study of Ayurvedic formulation: Gandhak Vati	Shruti Shah, B. K. Birla College of Arts, Science and Commerce (Autonomous), Kalyan, MHA, India.	This study aimed to standardize "Gandhaka Vati" by assessing its phytochemical and physicochemical properties. Following Ayurvedic Pharmacopoeia guidelines, tests were conducted on powder characteristics, phytochemical constituents, and biochemical aspects. Additional assessments included hardness, friability, organoleptic characteristics, and TLC. Instrumental analysis involved HPLC, HPTLC, and FTIR. These results contribute to the formulation's standardization.

2.5 Gairika (Red Ochre)

References: The Ayurvedic Pharmacopoeia of India, Part 01, Volume 07, Pg. 5.

Definition: Gairika is red ochre, an iron oxide (Fe_2O_3). This predominantly earthy form of the hematite mineral is also referred to as Reddle.

SYNONYMS

- **Sanskrit**: Kashayakkal, Kavi, Svarnagarika
- **Bangali** : Girima
- **English** : Ochre, Reddle
- **Gujarati** : Geru, Sonageru
- **Hindi** : Geru, Gerumitti
- **Kannada** : Hojatha, Jajoo, Kaavi, Kemmannu
- **Malayalam** : Kavimannu
- **Marathi** : Geru, Sonakava
- **Punjabi** : Geri
- **Tamil** : Seemaikkaavikkallu, Kavikkal (S.F.I.)
- **Telugu** : Kavirayi, Kaavi
- **Urdu** : Geru (Teen-e-Rumi) (N.F.U.M.)

Broad Classification: Oxide

Origin and occurrence: Gairika, essentially a hematite mineral, is a natural pigment found alongside other iron-titanium oxide minerals in igneous and metamorphic rocks as an accessory mineral. It is typically associated with magnetite and may contain minor amounts of titanium and magnesium. Gairika often forms as an alteration product of other iron minerals or through the degradation of highly ferruginous rocks, manifesting as weathered residual concentrations. It is commonly mixed with clay and other impurities.

In India, two types of ochres are prevalent based on their color: Red ochre and Yellow ochre. Anhydrous iron oxide represents red ochre (Gairika), while hydrated iron oxide denotes yellow ochre.

Gairika (Red ochre) is widely distributed across India. Deposits of Gairika are primarily found in various regions including Rajpur, Banaskantha, Jamnagar, and Kuchchh in Gujarat; Bellary and Bidar in Karnataka; Gwalior, Jabalpur, Satna, Kailashpur, Madhogarh, and Mandla in Madhya Pradesh; and Udaipur, Alwar, Bikaner, Chittorgarh, and Sawai Madhopur in Rajasthan. Other known occurrences exist in Andhra Pradesh and West Bengal.

PHYSICAL PROPERTIES

- **Nature** : Massive clayey
- **Colour** : Reddish brown
- **Streak** : Reddish brown
- **Fracture** : Uneven
- **Lustre** : Earthy
- **Tenacity** : Brittle
- **Transparency** : Opaque
- **Hardness** : 5.5 to 6.5 but much softer in earthy variety
- **Sp. Gr.** : 2.7

CHEMICAL PROPERTIES

- **Effect of Heat**: Gairika becomes magnetic on heating. Magnetism can be felt using a horse-shoe magnet

(Appendix-3.3.3/1.9). Does not easily fuse in a blow — pipe flame.

- **Solubility in Acid**: Soluble in hydrochloric acid.
- **Assay**: Gairika should not contain less than 16% Fe or not less than 21% Fe_2O_3 when analysed by gravimetric method (Appendix-3.1.4).
- **Heavy Metak Test**: Gairika should adhere to the specified limits for heavy metals and arsenic, which are Lead ≤ 6 ppm, Arsenic ≤ 2 ppm, and Cadmium ≤ 2 ppm, as outlined in Appendix-3.2.

  Other elements: May contain the following within ± 20% of the stated

  Limits: 1% Magnesium and 1% Titanium (Appendix-3.1 & 3.2).

  Shodhana: Shall not be used in formulations without subjecting it to shodhana.

SHODHANA:

Ref: Rasaratna Samuccaya, 3/49

गैरिकं तु गवां दुग्धैर्भावितं शुद्धिमृच्छति। (R.R.S., 3/49)

- **Gairika**: 1 Part
- **Go-dugdha**: Q.S. for Bhavana

METHOD:

First, finely powder Gairika. Then, mix it with Go-dugdha (cow's milk) three times, ensuring thorough incorporation each time. Dry the mixture properly. This prepared powder can be used for therapeutic purposes.

Gairika has the following attributes:

- **Properties and Actions**:
  - **Rasa** – Madhura, Kashaya
  - **Guna** – Snigdha, Visada
  - **Virya** – Sita
  - **Vipaka** – Madhura
  - **Karma** – Pitta-Nashaka, Balya, Vrana Ropana, Netrya, Kaphajit

Therapeutic Uses of Shuddha Gairika: Netra roga (diseases of eyes); Raktapitta (bleeding disorder); hikka (hiccup); vamana (vomiting); visa vikara (disorders due to poison); Rakta pradara (Menorrhagia or Metrorrhagia or both); kandu (itching); Jvara (fever); daha (burning sensation); Udara roga (diseases of abdomen).

Dose: 250 - 500 mg of Shuddha Gairika.

Important Formulations: Kumkumadi taila, Bhringaraja taila, Tutthadi lepa, Maha Jvarakusha rasa, Laghu Sutashekhara rasa, Kamadudha rasa (Mauktika yukta)

2.5.A GAIRIKA PRADEHA

Reference: Cha.Chi. Visarpa Rogadhyaya

शङ्ख प्रवाल: शुक्तिर्वा गैरिकं वा घृताप्लुतम्।

(Cha.Chi. Visarpa Rogadhyaya, 21/82)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Shuddha Gairika	—	1 Part
Ghrita	—	Q.S.

Procedure:

1. Collect all the ingredients of Gairika Pradeha.
2. Grind them into a fine powder and store it properly.
3. Before applying it to the body, mix with the Ghrita as the medium to create a soft paste.

Dose: External Use Only.

Therapeutic Indications: Visapra Roga

PHARMACODYNAMICS

1. **Antimicrobial**: Gairika (red ochre) possesses antimicrobial properties, which help in inhibiting the growth of microorganisms responsible for skin infections. This property is beneficial in managing Visarpa Roga (a type of skin disorder characterized by spreading lesions).
2. **Astringent**: Gairika acts as an astringent, causing contraction of skin tissues. This property helps in drying out the lesions, reducing inflammation, and promoting healing of the affected skin.
3. **Cooling**: Gairika has a cooling effect on the skin, which provides relief from itching, burning sensation, and other discomfort associated with skin infections.

PHARMACOKINETICS

1. **Topical Absorption**: When Gairika Pradeha is applied externally, the active constituents of Gairika are absorbed through the skin. The absorption rate may vary depending on factors such as skin integrity and the vehicle used (in this case, ghrita).
2. **Local Distribution**: Once absorbed, Gairika is distributed locally within the skin tissues. It exerts its therapeutic effects on the affected areas, targeting microbial growth and inflammation.
3. **Metabolism**: Metabolism of Gairika may occur locally within the skin cells. Metabolites formed through enzymatic processes contribute to the observed pharmacological actions, including antimicrobial and astringent effects.
4. **Elimination**: Metabolites and unabsorbed residues of Gairika may be eliminated from the skin surface

through perspiration and desquamation of skin cells. The duration of elimination depends on factors such as skin turnover rate and individual skin health.

RESEARCH UPDATES : No Data Found.

2.5.B LAGHUSUTASHEKHARA RASA

Reference: AFI, Part II, Page 282, Rasatantrasara VA Siddhaprayoga Sangraha, Kharliya Rasayana-330

सुवर्णगैरिकं शुद्धं द्वौ भागौ विश्वभेजम्।
भागैकं मेलयित्वा तत्सुखल्वे भावयेत्सुधीः।।
नागवल्या रसेनैव जायते शेखरो लघुः।
गुज्जाद्वयमितं दद्यात् पित्तदोषप्रशान्तये।।
अलिखितआयुर्वेदसंहिता; (A.Au.Gu.Dh.Sha. Pt. IV, Dr. 79)
(Vaidya Panchanana Gangadhara Gune)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Shuddha Garika	–	240 gms
Sunthi	Rz.	120 gms
Nagavalli Svarasa	Lf.	Q.S. for Bhavana 3 Days

Procedure:

1. Gather all the required dried ingredients for Laghusutashekhara Rasa. Ensure each ingredient is clean and free from impurities.
2. Using a Khalva Yantra or a grinder, grind each ingredient separately into a fine powder.
3. Filter each powdered ingredient through a clean cloth to remove any coarse particles.
4. Combine all the filtered powders together in a clean, dry container. Mix thoroughly to ensure a uniform blend of all ingredients.
5. Filter the compound powder mixture once again through a clean cloth to ensure a fine consistency.
6. Adding Nagavalli svarasa as bhavana for 3 days, until it becomes a concentrated form and suitable for making tablets or pills, then roll it into tablets or pills.
7. Expose the tray to sunlight or under hot air oven for several hours to days until the material is completely dry.
8. Once fully dried, collect the dried material. This final product is called Laghusutashekhara Rasa.
9. Store the Laghusutashekhara Rasa in a clean, dry, airtight container to preserve its potency and freshness.

Dose: 250 mg to 500 mg

Anupana: Sitayukta Dugdha

Therapeutic Indications: Pittaja Sirashula, Ardhavabhedaka, Suryavata, Pittaja Unmada, Daha, Urddhvarakta pitta, Mukha Paka.

PHARMACODYNAMICS

1. **Analgesic:** Laghusuta Shekhara Rasa exhibits analgesic properties, which help in alleviating pain associated with Pittaja Sirashula (headache due to Pitta vitiation), Arddhavabhedaka (migraine), and other conditions affecting the head and face.
2. **Anti-inflammatory:** The formulation possesses anti-inflammatory effects, reducing inflammation and swelling in conditions like Suryavata (migraine with symptoms like photophobia, phonophobia, and nausea) and Pittaja Unmada (mental disorders due to Pitta imbalance).
3. **Cooling:** Laghusuta Shekhara Rasa has a cooling effect on the body, which helps in pacifying symptoms like Daha (burning sensation) and Urddhvaraktapitta (bleeding disorders affecting the upper part of the body).
4. **Digestive:** Shunthi (ginger) in the formulation aids in digestion and helps in managing Pittaja conditions, including Pittaja Sirashula and Mukha Paka (oral ulcers).

PHARMACOKINETICS

1. **Absorption:** The active constituents of Laghusuta Shekhara Rasa are absorbed through the gastrointestinal tract upon oral administration. Shunthi may enhance the absorption of other ingredients due to its bioavailability-enhancing properties.
2. **Distribution:** Once absorbed, the components are distributed throughout the body via the bloodstream. They exert their therapeutic effects on various target tissues, including the head, face, and digestive system.
3. **Metabolism:** Metabolism of the ingredients may occur in the liver and other tissues. Metabolites formed may contribute to the observed pharmacological actions, including analgesic and anti-inflammatory effects.
4. **Excretion:** Metabolites and unmetabolized residues are eliminated primarily through urine and feces. The duration of excretion depends on factors such as renal function and hepatic metabolism.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Mode of Action of Laghusut Shekhara Rasa In Ardhavbhedaka (Migraine)	Amit Nageshwara Post Graduate Scholar, PG Department of Rasashastra and Bhaisajya Kalpana, Shubhdeep Ayurved Medical College and Hospital, Indore, Madhya Pradesh, India	Laghu Sutshekhara Rasa, with its properties of laghu, katu, snigdha, and ushna, is effective in correcting the imbalanced state of vata and pitta, thereby improving Ardhavabhedaka (Migraine). This formulation aids in reducing the vitiated dravya rupa of pitta and supports proper agni functioning. These herbo-mineral compounds offer a promising and straightforward treatment approach for migraine, potentially marking a significant breakthrough in its management.
2.	Standardization of Laghu Suta Shekhara Rasa – An Analytical Study	Pallavi Y.C. Assistant Professor, Dept. of PG Studies in Rasa Shastra, JSS Ayurveda Medical College, Mysore, Karnataka, India.	Laghu Suta Shekhara Rasa, prepared according to Rasa Tarangini, underwent qualitative and quantitative analysis, including TLC, ash value, and X-Ray Diffraction. Godugdha and Goghrita were also analyzed. Samples with purified gairika showed minor changes in iron, silica, and alumina content.
3.	Scientific Explantion of Mode of Action of Laghu Sutshekhar Rasa in Amlapitta	Dr. Varsha Hiwale, India.	Laghu Sutshekhara Rasa corrects imbalanced Pitta, enhancing digestion and promoting proper Agni function. Its properties, including laghu, katu, snigdha, and ushana, reduce the vitiated Drava roop of Pitta, potentially marking a breakthrough in Amlapitta treatment.
4.	Physicochemical Evaluation of Laghu Sutasekhara Rasa Tablets with special reference to Gairika Shodhana	Sharma, Vinay, Department of Rasa Shastra & Bhaisajya Kalpana, Institute of Post Graduate Training & Research in Ayurveda, Gujarat Ayurved University, Jamnagar, Gujarat, India.	Standard Operating Procedures (SOPs) and quality control parameters are crucial for ensuring the consistent preparation of Laghu Sutshekhara Rasa tablets. The CDCs (Critical Control Points) of Shuddha Gairika can be implemented in the purification process. Hypotheses regarding Gairika purification can be explored through chemical analyses, paving the way for further studies.

2.5.c GAIRIKADYA MALAHARA

Reference: AFI, Part III, Page 224, B.H.U. Anubhutayoga

INGREDIENTS USED

Drug Name	Part Used	Proportion
Shuddha Svarna Garika	—	12 gms
Haridra	Rz.	12 gms
Hartala	—	1 gm
Siktha Taila	—	72 gms

Procedure:

Collect all the ingredients of Gairikadya Malahara. All the ingredients except Siktha Taila should be taken in a mortar and ground well. Then, Siktha Taila should be mixed in thoroughly and ground continuously for some hours. This mixture is known as Gairikadya Malahara and should be preserved in a glass container.

Dose: External Application

Therapeutic Indications: Kandu, Tvak Roga Adhikara.

PHARMACODYNAMICS

1. **Anti-inflammatory:** Haridra (turmeric) possesses potent anti-inflammatory properties due to its active compound, curcumin. This helps in reducing inflammation, redness, and itching associated with various skin disorders like kandu (itching) and tvak roga (skin diseases).
2. **Antibacterial:** Haridra exhibits antibacterial activity against a wide range of microorganisms. This property aids in preventing and treating bacterial infections of the skin, thus promoting healing.
3. **Antifungal:** Turmeric is known for its antifungal properties, which are beneficial in managing fungal infections of the skin, including ringworm and candidiasis.
4. **Astringent:** Shuddha Svarna Gairika (purified red ochre) acts as an astringent, tightening the skin tissues and reducing secretions. This property helps in drying out the lesions and promoting healing.

PHARMACOKINETICS

1. **Topical Absorption:** When applied externally, the active constituents of Gairikadya Malahara are absorbed through the skin. The absorption may vary depending on factors such as skin integrity, formulation, and duration of application.
2. **Local Distribution:** Once absorbed, the herbal components are distributed locally within the skin tissues, where they exert their therapeutic effects. They target inflammation, microbial growth, and other underlying factors contributing to skin disorders.
3. **Metabolism:** Metabolism of the herbal constituents may occur locally within the skin cells. Metabolites

formed through enzymatic processes contribute to the observed pharmacological actions of Gairikadya Malahara.

4. **Elimination**: Metabolites and unabsorbed residues are likely eliminated from the skin surface through perspiration and desquamation of skin cells. The duration of elimination may vary depending on factors such as skin turnover rate and individual skin health.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Preparation, standardization, and in vitro antimicrobial efficacy of Gairikadya malahara – An Ayurvedic ointment	Dr. Danish Javed, Department of Ayush, All India Institute of Medical Sciences, Saket Nagar, Bhopal, M.P., India	The drug, prepared according to standard protocols, underwent physiochemical, heavy metal, and microbiological analyses for standardization. Antimicrobial studies revealed effectiveness against various microorganisms. Results complied with Ayurvedic Pharmacopoeia standards. Gairikadya malahara is safe and effective in preventing infections on granulation surfaces, validated by thorough standardization. Further clinical studies on chronic nonhealing ulcers are recommended.

2.5.D GAIRIKADYA GUTIKANJANA

Reference: B.R., Netraroga

गैरिकं सैन्धवं कृष्णा तगरञ्च यथोत्तरम्।
पिष्टं द्विरंशतोऽद्भिर्वा गुडिकाञ्जनमिष्यते।।

(B.R., Netraroga., 64/21)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Shuddha Gairika	—	1 Part
Saindhava Lavana	—	2 Parts
Pippali	Fr.	4 Parts
Tagar		8 Parts
Goat Milk/ Water	—	Q.S. For Bhavana

Procedure:

1. Prepare a fine powder of all the dravyas.
2. After giving Bhavana with Ajakshira the paste should be coated on a Tamra Patra (Copper Vessel).
3. When dry, it is collected and made into pills.
4. Store it in a clean, dry, airtight container.

Dose: External use only.

Size of Gutika: 1 inch

Therapeutic Indications: Abhishyanda

PHARMACODYNAMICS

1. **Cooling and Soothing Effect**: Gairikadya Gutikanjana contains Shuddha Gairika (purified red ochre), which imparts cooling and soothing properties. This helps in reducing inflammation, redness, and discomfort associated with various eye conditions.
2. **Antibacterial and Antimicrobial**: The presence of Saindhava Lavana (rock salt) contributes antibacterial properties, helping to prevent and treat bacterial infections of the eyes. Additionally, Pippali (long pepper) possesses antimicrobial properties, further aiding in combating infections.
3. **Anti-inflammatory**: Pippali and Tagar have anti-inflammatory properties, which help in reducing inflammation and swelling in the eyes. This action is beneficial in conditions such as conjunctivitis and eye strain.
4. **Astringent Action**: Shuddha Gairika acts as an astringent, toning the ocular tissues and reducing excessive secretions. This action helps in improving the overall health of the eyes and maintaining their moisture balance.

PHARMACOKINETICS

1. **Topical Absorption**: When applied externally to the eyes, the active constituents of Gairikadya Gutikanjana are absorbed through the conjunctival tissues. The absorption may vary depending on factors such as the integrity of the ocular surface and the solubility of the herbal components.
2. **Local Distribution**: The absorbed herbal compounds are distributed locally within the ocular tissues, where they exert their therapeutic effects. They target inflammation, infection, and other underlying factors contributing to various eye ailments.
3. **Metabolism**: Metabolism of the herbal constituents may occur locally within the eye tissues. Metabolites formed through enzymatic processes contribute to the observed pharmacological actions of Gairikadya Gutikanjana.
4. **Elimination**: Metabolites and unabsorbed residues are likely eliminated from the eye surface through tear production and drainage into the nasolacrimal duct. The duration of elimination may vary depending on factors such as tear turnover rate and individual eye health.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Role of Girikarnyadi Gutikaanjana in the Management of Krimi Granthi—A Review	Dr. Shwetha G.R. Post Graduate Scholar, Department of Shalakya Tantra, Government Ayurvedic Medical College, Bengaluru, Karnatka, India.	The chemical forms of metals can affect bioavailability, and the trituration process enhances physico-chemical changes, boosting material efficacy. Thus, the synergistic action of multiple active chemicals in Girikarnyadi Gutika's herbo-mineral combination may yield favourable results.

2.5.E GAIRIKA RASAKRIYA

Reference: Cha.Chi. 26/235

गैरिकं सैन्धवं मुस्तं रोचना च रसक्रिया। (Cha.Chi. 26/235)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Shuddha Gairika	—	1 Part
Saindhava Lavana	—	1 Part
Nagarmotha	Dr. Rz.	1 Part
Gorochana	—	1 Part

Procedure:

1. Take all the ingredients of Gairika Rasakriya.
2. Prepare a paste of all the dravyas like semi-solid consistency.
3. Used as Vidalaka as netra kriya kalpa.

Dose: External Used Only

Therapeutic Indications: Pittaja Netra Roga.

PHARMACODYNAMICS

1. **Cooling Effect:** Gairika Rasakriya is formulated with Shuddha Gairika (red ochre), which has cooling properties. This cooling effect helps in pacifying Pitta dosha, thereby reducing inflammation and heat-related symptoms in Pittaj Netra Roga (conditions related to Pitta imbalance in the eyes).
2. **Anti-inflammatory:** The combination of Saindhava Lavana (rock salt), Nagarmotha, and Gorochana may possess anti-inflammatory properties. These ingredients work synergistically to alleviate inflammation and redness in the eyes, providing relief from conditions like conjunctivitis and eye strain.
3. **Antibacterial:** Saindhava Lavana and Gorochana have antibacterial properties that help in preventing bacterial infections in the eyes. By inhibiting the growth of bacteria, this formulation supports the healing process of various infectious eye conditions.
4. **Astringent Action:** Gairika Rasakriya's astringent properties, attributed to Shuddha Gairika and Nagarmotha, help in toning the tissues of the eyes. This action aids in tightening the tissues, reducing excessive secretions, and promoting overall eye health.

PHARMACOKINETICS

1. **Topical Absorption:** When applied externally to the eyes, the active constituents of Gairika Rasakriya are absorbed through the conjunctival tissues. The absorption may vary depending on factors such as the integrity of the ocular surface and the solubility of the herbal components.
2. **Local Distribution:** The absorbed herbal compounds are distributed locally within the ocular tissues, where they exert their therapeutic effects. They target inflammation, infection, and other underlying factors contributing to Pittaj Netra Roga.
3. **Metabolism:** Metabolism of the herbal constituents may occur locally within the eye tissues. Metabolites formed through enzymatic processes contribute to the observed pharmacological actions of Gairika Rasakriya.
4. **Elimination:** Metabolites and unabsorbed residues are likely eliminated from the eye surface through tear production and drainage into the nasolacrimal duct. The duration of elimination may vary depending on factors such as tear turnover rate and individual eye health.

RESEARCH UPDATES : No Data Found.

2.5.F VARNAKARA LEPA

Reference: Cha.Chi. 25/117

ध्यामकाश्वत्थनिचुलमूलं लाक्षा सगैरिका।
सहेमश्चामृतासङ्गः कासीसं चेति वर्णकृत्।। (Cha.Chi. 25/117)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Dhayamaka	Pl.	1 Part
Pipala	Resin	1 Part
Veta	Rt.	1 Part
Shuddha Gairika	—	1 Part
Nagakesara	Sd.	1 Part
Amritasanga (Tutha)	—	1 Part
Kasisa	—	1 Part

Procedure:

1. Collect all the ingredients of Varnakara Lepa.

2. Grind them into a fine powder and store it properly.
3. Before applying it to the body, mix with the Gokshira/Rose water as the medium to create a soft paste.

Dose: External Use Only.

Therapeutic Indications: All types of Varna.

PHARMACODYNAMICS

1. **Skin Rejuvenation:** Varnakara lepa is formulated with ingredients known for their skin rejuvenating properties. Dhayamaka, Pipala, and Veta promote skin health and vitality by providing nourishment and improving blood circulation to the skin tissues.
2. **Pigmentation Control:** Shuddha Gairika, Nagakesara, Amritasanga (Tutha), and Kashisha are renowned for their ability to manage various types of skin pigmentation disorders. They help in reducing melanin production, thereby lightening dark spots, hyperpigmentation, and uneven skin tone.
3. **Anti-inflammatory:** Some components of the lepa, such as Dhayamaka and Nagakesara, possess anti-inflammatory properties. They help in soothing irritated skin, reducing redness, and alleviating inflammation associated with skin conditions like acne, eczema, and dermatitis.
4. **Antioxidant:** The formulation may exhibit antioxidant activity attributed to ingredients like Pipala and Veta. Antioxidants help in neutralizing free radicals, thereby protecting the skin from oxidative damage and premature aging.

PHARMACOKINETICS

1. **Topical Absorption:** When applied externally, the active constituents of Varnakara lepa are absorbed through the skin. The absorption may vary depending on factors such as skin permeability and the solubility of the herbal components.
2. **Local Distribution:** Upon absorption, the herbal compounds are distributed locally within the skin layers, where they exert their therapeutic effects. They target the melanocytes, sebaceous glands, and inflammatory mediators present in the skin
3. **Metabolism:** The metabolism of the herbal constituents may occur locally within the skin cells. Metabolites formed through enzymatic processes contribute to the observed pharmacological actions of the lepa.
4. **Elimination:** Metabolites and unabsorbed residues are eliminated from the skin surface through natural processes such as sweating and shedding of skin cells. The duration of elimination may vary depending on factors like skin turnover rate and individual skin health.

RESEARCH UPDATES : No Data Found.

MULTIPLE CHOICE QUESTIONS

1. **Which part of the Guduchi plant is used to prepare Guduchi Svarasa?**
   a. Leaves
   b. Stem
   c. Roots
   d. Flowers
2. **What is the main pharmacological property of Guduchi Svarasa?**
   a. Antipyretic
   b. Analgesic
   c. Rasayana (rejuvenating)
   d. Sedative
3. **What is the recommended Anupana (adjuvant) for consuming Guduchi Svarasa?**
   a. Milk
   b. Ghee
   c. Honey
   d. Water
4. **What is the primary indication for using Guduchi Svarasa?**
   a. Fever
   b. Digestive disorders
   c. Skin diseases
   d. All types of Prameha (diabetes)
5. **How does Guduchi Svarasa benefit diabetic patients?**
   a. By lowering blood pressure
   b. By improving vision
   c. By regulating blood sugar levels and enhancing insulin sensitivity
   d. By promoting weight loss
6. **Which of the following is NOT an ingredient of Guduchyadi Churna?**
   a. Tulasi
   b. Ativisha
   c. Shunthi
   d. Chirayata
7. **What is the recommended dose of Guduchyadi Churna?**
   a. 1 gram
   b. 2 grams
   c. 3 grams
   d. 4 grams
8. **What is the primary indication for using Guduchyadi Churna?**
   a. Joint pain
   b. Respiratory disorders
   c. Liver and spleen diseases
   d. Kidney stones

9. Which ingredient of Guduchyadi Churna helps in enhancing digestion?
   a. Guduchi
   b. Ativisha
   c. Shunthi
   d. Nagaramotha
10. How is Guduchyadi Churna administered?
   a. Mixed with hot water
   b. In the form of a tablet
   c. Orally as a powder mixed with cold water
   d. Applied topically as an ointment
11. Which ingredient of Nishabdi Jvarari Kashaya has expectorant properties?
   a. Musta
   b. Chirayata
   c. Kantkari
   d. Bilva
12. What is the primary indication for using Nishabdi Jvarari Kashaya?
   a. Joint pain
   b. Respiratory disorders
   c. Liver and spleen diseases
   d. All types of fever
13. Which herb in Nishabdi Jvarari Kashaya is rich in vitamin C and acts as an antioxidant and immune booster?
   a. Amala
   b. Shunthi
   c. Bilva
   d. Katuki
14. How is Nishabdi Jvarari Kashaya administered?
   a. Orally as a powder
   b. Orally as a decoction
   c. Topically as an ointment
   d. Subcutaneously as an injection
15. Which herb in Nishabdi Jvarari Kashaya is particularly effective in protecting the liver?
   a. Chirayata
   b. Gambhari
   c. Arni
   d. Katuki
16. What is the primary indication for using Guduchi Hima?
   a. Joint pain
   b. Digestive disorders
   c. Fever and vomiting
   d. Respiratory infections
17. What is the main function of Guduchi and Nimba in Guduchi Hima?
   a. Enhancing digestion
   b. Alleviating joint pain
   c. Reducing fever
   d. Relieving respiratory symptoms
18. Which ingredient of Guduchi Hima contributes to its cooling effect and helps soothe inflammation?
   a. Dhaniya
   b. Padmaka
   c. Rakta Chandana
   d. Nimba
19. How is Guduchi Hima administered?
   a. Orally as a tablet
   b. Topically as a cream
   c. Orally as a decoction
   d. Subcutaneously as an injection
20. What is the recommended Anupana (adjuvant) for consuming Guduchi Hima?
   a. Water
   b. Milk
   c. Ghee
   d. Honey
21. What is the primary therapeutic indication for Guduchi Ghana (Samshamani Vati)?
   a. Joint pain
   b. Digestive disorders
   c. Fever
   d. Respiratory infections
22. How is Guduchi Ghana prepared?
   a. By distillation
   b. By maceration
   c. By decoction
   d. By fermentation
23. What is the recommended dose of Guduchi Ghana?
   a. 100-250 mg
   b. 250-500 mg
   c. 500-750 mg
   d. 750-1000 mg
24. How does Guduchi Ghana exert its antipyretic effects?
   a. By increasing body temperature
   b. By stimulating white blood cell production
   c. By regulating body temperature and reducing fever
   d. By inducing inflammation
25. Apart from fever, what other condition can Guduchi Ghana help manage?
   a. Hypertension
   b. Diabetes
   c. Anaemia
   d. Anxiety
26. What is the primary therapeutic indication for Guduchi Sattva?
   a. Joint pain
   b. Digestive disorders
   c. Liver disorders
   d. Blood disorders
27. How is Guduchi Sattva administered?
   a. Orally as a tablet
   b. Orally as a decoction
   c. Orally as a powder mixed with honey
   d. Topically as an ointment
28. What is the recommended dose of Guduchi Sattva?
   a. 500 mg
   b. 1 gram
   c. 2 grams
   d. 5 grams
29. What is the primary pharmacodynamic effect of Guduchi Sattva?
   a. Antipyretic effect
   b. Analgesic effect
   c. Antihypertensive effect
   d. Antihistaminic effect

30. How does Guduchi Sattva exert its hepato-protective effect?
    a. By increasing liver enzymes
    b. By inhibiting liver function
    c. By scavenging free radicals and promoting liver cell regeneration
    d. By reducing liver size
31. What is the primary therapeutic indication for Amritadi Guggulu?
    a. Joint pain
    b. Digestive disorders
    c. Skin disorders
    d. Respiratory infections
32. How is Amritadi Guggulu administered?
    a. Orally as a tablet
    b. Orally as a decoction
    c. Topically as an ointment
    d. Intravenously as an injection
33. What is the recommended dose of Amritadi Guggulu?
    a. 100-250 mg
    b. 250-500 mg
    c. 500-750 mg
    d. 750-1000 mg
34. Which ingredient in Amritadi Guggulu contributes to its digestive and carminative effects?
    a. Guduchi
    b. Haritaki
    c. Pippali
    d. Guggulu
35. What is the primary pharmacodynamic effect of Amritadi Guggulu?
    a. Antipyretic effect
    b. Analgesic effect
    c. Anti-inflammatory effect
    d. Antihypertensive effect
36. What is the primary therapeutic use of Amritarishta?
    a. Skin disorders
    b. Respiratory infections
    c. Fever
    d. Digestive disorders
37. Which ingredient in Amritarishta is primarily responsible for its antimicrobial effects?
    a. Shunthi
    b. Indrayava
    c. Pippali
    d. Ativisha
38. How is Amritarishta administered?
    a. Topically as an ointment
    b. Orally as a tablet
    c. Orally as a decoction
    d. Intravenously as an injection
39. What is the recommended dose of Amritarishta?
    a. 5-10 ml
    b. 12-24 ml
    c. 25-50 ml
    d. 50-100 ml
40. Which herb in Amritarishta contributes to its digestive and carminative effects?
    a. Guduchi
    b. Ajaji
    c. Shunthi
    d. Saptachada
41. Which component of Amalaki Svarasa primarily contributes to its antioxidant effects?
    a. Honey
    b. Haridra
    c. Vitamin C
    d. Amalaki
42. How does honey contribute to the pharmacodynamics of Amalaki Svarasa?
    a. By promoting liver health
    b. By enhancing immune function
    c. By providing antimicrobial effects
    d. By aiding in digestion and acting as an antioxidant
43. Which ingredient in Amalaki Svarasa is responsible for its antimicrobial effects?
    a. Amalaki
    b. Haridra
    c. Honey
    d. Vitamin C
44. How is Amalaki Svarasa administered?
    a. Orally with honey and Haridra
    b. Topically as an ointment
    c. Intravenously as an injection
    d. Orally as a tablet
45. What is the primary pharmacokinetic route of metabolism for the active compounds in Amalaki Svarasa?
    a. Kidneys (urine)
    b. Gastrointestinal tract (feces)
    c. Liver
    d. Immune cells
46. Which component of Amalakyadi Churna primarily contributes to its antipyretic effect?
    a. Chitraka
    b. Haritaki
    c. Pippali
    d. Amalaki
47. How does Haritaki contribute to the pharmacodynamics of Amalakyadi Churna?
    a. By stimulating digestive enzymes
    b. By enhancing gut motility
    c. By reducing inflammation and pain
    d. By boosting the immune system
48. Which therapeutic use is NOT associated with Amalakyadi Churna?
    a. Bedana
    b. Aruchikara
    c. Dipana
    d. Kaphahara
49. How is the absorption of active compounds in Amalakyadi Churna enhanced?
    a. By the use of honey

b. By the use of ghee
c. By the use of Saindhava (rock salt)
d. By the use of Haritaki

50. Which part of the body primarily metabolizes the active compounds in Amalakyadi Churna?
a. Kidneys
b. Liver
c. Gastrointestinal tract
d. Immune system

51. How is the administration of Triphala Rasayana divided throughout the day?
a. One Abhaya before meals, two Bibhitaki during meals, and three Amalaki after meals.
b. One Abhaya before meals, two Bibhitaki before meals, and three Amalaki during meals.
c. One Abhaya after meals, two Bibhitaki before meals, and three Amalaki with honey and ghee during meals.
d. One Abhaya after meals, two Bibhitaki during meals, and three Amalaki with honey and ghee before meals.

52. What is the recommended duration of Triphala Rasayana intake?
a. 6 months
b. 1 year
c. 3 years
d. 6 years

53. What are the benefits of Triphala Rasayana according to the text?
a. Longevity and freedom from aging
b. Improved digestion and vitality
c. Enhanced mental clarity and memory
d. Relief from joint pain and inflammation

54. Which of the following ingredients in Chyavanaprasha contributes to its antioxidant properties?
a. Arjuna
b. Gokshura
c. Amalaki
d. Vidari

55. What is the recommended dose of Chyavanaprasha?
a. 6-12 gms
b. 12-24 gms
c. 24-48 gms
d. 48-96 gms

56. Which therapeutic indication is NOT listed for Chyavanaprasha?
a. Respiratory Health
b. Digestive Health
c. Dermatological Disorders
d. Cardiovascular Health

57. Which ingredient in Dhatri Lauha contributes to its hematopoietic effect?
a. Amalaki
b. Yastimadhu
c. Lauha Bhasma
d. Amrita Kvatha

58. What is the recommended dose of Dhatri Lauha?
a. 1-2 gms
b. 2-4 gms
c. 0.5-1 gm
d. 3-6 gms

59. Which therapeutic indication is NOT listed for Dhatri Lauha?
a. Netraroga
b. Mukharoga
c. Pandu
d. Kamala

60. What is the primary indication for Amalakyadi Gutika?
a. Hridroga
b. Trishna
c. Sandhivata
d. Netraroga

61. What is the therapeutic indication for Phalatrikadi Kvatha?
a. Respiratory disorders
b. Gastrointestinal disorders
c. Skin disorders
d. Diabetes

62. Which ingredient in Triphala Ghrita contributes to its antimicrobial properties?
a. Haritaki
b. Bibhitaki
c. Pippali
d. Maricha

63. Which ingredient in Triphala Ghrita contributes to its antioxidant and anti-inflammatory effects, crucial for eye health?
a. Pippali
b. Haritaki
c. Bhringaraja
d. Nagara

64. What is the recommended dose of Bhallataka Modaka for treating Pliha Vriddhi Vikara Nashta?
a. 1 gram for 7 days
b. 1 gram daily
c. 6 grams for 1 day
d. 7 grams for 7 days

65. Which part of the Bhallataka fruit is used in the preparation of Bhallataka Modaka?
a. Seed
b. Pulp
c. Skin
d. Pericarp

66. What is the primary function of the Kvatha Dravya in Bhallataka Ghrita?
a. To provide flavor
b. To enhance absorption
c. To provide therapeutic benefits
d. To act as a preservative

67. Which ingredient in Bhallataka Ghrita contributes to its anti-inflammatory properties?
a. Pippali
b. Shunthi
c. Vacha
d. Vidanga

68. What is the main therapeutic indication of Bhallataka Ghrita?
a. Arthritis
b. Liver enlargement
c. Respiratory disorders
d. Eye diseases

69. What is the primary therapeutic indication for Bhallataka Guda?
a. Rakta Pitta
b. Vata Vyadhi
c. Kapha Dosha
d. Arsha

70. Which ingredient contributes to the anti-inflammatory properties of Bhallataka Guda?
a. Amalaki
b. Haritaki
c. Shunthi
d. Pippali

71. How is Bhallataka Guda prepared before consumption?
a. Grinding
b. Boiling
c. Chopping
d. Extracting

72. Which condition is NOT listed as a therapeutic indication for Bhallataka Guda?
a. Kamala
b. Kasa
c. Prameha
d. Pandu

73. What is the approximate quantity of Shuddha Bhallataka used in the preparation of Bhallataka Guda?
a. 2500 grams
b. 250 grams
c. 25 grams
d. 2.5 kilograms

74. Which ingredient in Bhallatakadi Taila contributes primarily to its antimicrobial properties?
a. Maricha
b. Arka
c. Haridra
d. Bhallataka

75. What is the therapeutic indication for Bhallatakadi Taila?
a. Vata Vyadhi
b. Nadivarna
c. Prameha
d. Kamala

76. Which part of the Bhallataka plant is used in the preparation of Bhallatakadi Taila?
a. Seeds
b. Leaves
c. Pericarp
d. Roots

77. How is Bilva Svarasa incorporated into Bhallatakadi Taila?
a. As an extract
b. As a powder
c. As a paste
d. As a juice

78. What is the role of Tila Taila in Bhallatakadi Taila?
a. It acts as a preservative.
b. It enhances the fragrance.
c. It facilitates wound healing.
d. It provides color to the oil.

79. What is the primary therapeutic indication for Bhallataka Avaleha?
a. Shotha
b. Krimi
c. Arsha Roga
d. Pandu

80. Which component of Bhallataka Avaleha is responsible for its aphrodisiac properties?
a. Water
b. Ghrita
c. Shuddha Bhallataka
d. Sugar

81. What is the primary therapeutic indication for Bhallatakadi Lepa?
a. Pandu
b. Arsha
c. Shotha
d. Grahani

82. Which ingredient in Bhallatakadi Lepa contributes to its antimicrobial properties?
a. Arka
b. Shunuhi
c. Pippali
d. Saindhava Lavana

83. What is the recommended method of application for Bhallatakadi Lepa?
a. Oral consumption
b. Intravenous injection
c. Local application
d. Inhalation

84. Which condition is NOT listed as a therapeutic indication for Bhallatakadi Lepa?
a. Kushtha
b. Kilasa
c. Tila Kalaka
d. Svasa

85. What role does Languli play in the Bhallatakadi Lepa formulation?
a. Provides astringent properties
b. Enhances absorption
c. Improves color and texture
d. Acts as a preservative

86. Which condition is Bhallatakadi Kvatha primarily indicated for?
a. Kushtha
b. Arsha
c. Urustambha Roga
d. Shotha

87. Which herb in Bhallatakadi Kvatha possesses immunomodulatory effects?
a. Punarnava
b. Gokshur
c. Guduchi
d. Haritaki

88. What is the recommended anupana (vehicle) for Bhallatakadi Kvatha?
a. Warm milk
b. Warm water
c. Honey
d. Ghee

89. Which herb in Bhallatakadi Kvatha is known for its muscle relaxant properties?
a. Haritaki
b. Gokshur
c. Punarnava
d. Shuddha Bhallataka

90. How is Bhallatakadi Kvatha prepared in terms of the proportion of water used?
a. Water is used equal to the weight of the herbs
b. Water is used 8 times the weight of the herbs
c. Water is used 16 times the weight of the herbs
d. Water is used 4 times the weight of the herbs

91. What is the primary action of Gandhaka Churna?
a. Pittahara
b. Vatahara
c. Kaphahara
d. Tridoshahara

92. Which of the following is NOT an ingredient of Gandhaka Churna?
a. Shuddha Gandhaka
b. Shuddha Parada
c. Kakamachi Svarasa
d. Bhringaraja Svarasa

93. How is Gandhaka Churna administered?
a. With honey
b. With water
c. With milk
d. With ghee

94. What is the pharmacological indication of Gandhaka Churna?
a. Vishaghna
b. Rasayana
c. Sarva Prakara Kushtha
d. Jvarahara

95. How does Gandhaka Churna exert its antimicrobial effects?
a. By promoting inflammation
b. By increasing moisture
c. By inhibiting fungal and bacterial growth
d. By reducing excess heat

96. Which of the following is NOT an indication for Gandhaka Rasayana?
a. Atisara
b. Grahani
c. Svasa
d. Kasa

97. What is the primary action of Gandhaka Rasayana?
a. Pittahara
b. Vatahara
c. Kaphahara
d. Tridoshahara

98. Which of the following is NOT an ingredient used in Gandhaka Rasayana?
a. Ela Kvatha
b. Shunthi Kvatha
c. Brahmi Svarasa
d. Adaraka Svarasa

99. How is Gandhaka Rasayana administered?
a. With honey
b. With water
c. With milk
d. With ghee

100. What is the therapeutic indication of Gandhaka Rasayana related to skin disorders?
a. Jirnajvara
b. Meha
c. Kandu
d. Agnimandya

101. What is the main ingredient used in Gandhaka Druti?
a. Guduchi
b. Gandhaka
c. Haritaki
d. Triphala

102. What is the proportion of Trikatu Churana used in Gandhaka Druti?
a. 1/2 Part
b. 1/4 Part
c. 1/8 Part
d. 1/16 Part

103. What is the dose of Gandhaka Druti?
a. 1 Drop
b. 2 Drops
c. 3 Drops
d. 5 Drops

104. Which of the following is an anupana (vehicle) for Gandhaka Druti?
a. Honey
b. Nagvalli Parta Churana
c. Warm Water
d. Milk

105. Which of the following therapeutic indications is NOT mentioned for Gandhaka Druti?
a. Agnimandya
b. Kshaya
c. Kasa
d. Vatarakta

106. What is the main ingredient used in Gandhaka Taila?
a. Guduchi
b. Shuddha Gandhaka
c. Haritaki
d. Triphala

107. What is the recommended usage of Gandhaka Taila?
a. Internal Use Only
b. External Use Only
c. Both Internal and External Use
d. None of the above

108. Which of the following is NOT a therapeutic indication for Gandhaka Taila?
a. Kushtha
b. Kshudra
c. Visarpa
d. Grahani

109. How does Gandhaka Taila act on Rakta Dushti Janya conditions?
a. Acts as a blood purifier
b. Reduces fever
c. Enhances digestion
d. Improves respiratory function

110. What is the primary pharmacodynamic action of Gandhaka Taila for Kushtha?
a. Antiviral
b. Antibacterial, antifungal, and anti-inflammatory
c. Antipyretic
d. Analgesic

111. What is the main ingredient in Gandhakadya Malahara used for its antibacterial and antifungal properties?
a. Sikta Taila
b. Shuddha Gandhaka
c. Karpura
d. Shuddha Tankana

112. Which ingredient in Gandhakadya Malahara is measured at 72 grams?
a. Shuddha Gandhaka
b. Girisindura
c. Sikta Taila
d. Karpura

113. What is the primary therapeutic indication for Gandhakadya Malahara?
a. Grahani
b. Visarpa
c. Pama
d. Kushtha

114. Which property of Gandhakadya Malahara helps in reducing redness, swelling, and pain associated with skin conditions?
a. Antibacterial
b. Anti-inflammatory
c. Astringent
d. Healing

115. How does Gandhakadya Malahara aid in wound healing?
a. By reducing oiliness
b. By accelerating the regeneration of skin cells
c. By acting as an antioxidant
d. By improving digestion

116. What is the total quantity of Girisindura used in the formulation?
a. 2 grams
b. 6 grams
c. 72 grams
d. 10 grams

117. How does Gandhakadya Malahara act as an astringent?
a. By increasing moisture retention
b. By tightening and toning the skin
c. By providing a cooling effect
d. By enhancing blood circulation

118. When Gandhakadya Malahara is applied topically, how are its active constituents primarily absorbed?
a. Through the gastrointestinal tract
b. Through the bloodstream
c. Through the skin layers
d. Through the respiratory system

119. Which ingredient in Gandhakadi Lepa is responsible for its antibacterial and antifungal properties?
a. Saindhava Lavana
b. Kachanara
c. Shuddha Gandhaka
d. Arka Latex

120. Gandhakadi Lepa is indicated for which skin condition?
a. Kushtha
b. Pama
c. Gandamala
d. Visarpa

121. What role does Shuddha Parada play in Gandhakadi Lepa?
a. It acts as an antibacterial agent.
b. It provides an astringent effect.
c. It aids in anti-inflammatory action.
d. It enhances the healing process.

122. How is Gandhakadi Lepa typically applied?
a. Internally, with milk as Anupana
b. Externally, on the affected skin area
c. Internally, with water as Anupana
d. Orally, in capsule form

123. What is the primary therapeutic action of the astringent property in Gandhakadi Lepa?
a. Inhibiting bacterial growth
b. Tightening and toning the skin
c. Reducing itching
d. Promoting granulation tissue formation

124. What is the function of Arka Latex in Gandhakadi Lepa?
a. It acts as a binding agent.
b. It provides anti-inflammatory effects.
c. It is used to dilute the formulation.
d. It serves as a medium for application.

125. Which pharmacokinetic process ensures the local therapeutic effect of Gandhakadi Lepa?
a. Absorption
b. Distribution
c. Metabolism
d. Elimination

126. What is the primary benefit of the healing property of Gandhakadi Lepa?
a. Tightening the skin
b. Reducing bacterial growth
c. Promoting wound healing
d. Enhancing metabolism

127. How does Gandhakadi Lepa help in reducing skin inflammation?
a. By acting as a dipana (appetizer)
b. By providing antimicrobial effects
c. By exhibiting anti-inflammatory effects
d. By acting as a blood purifier

128. What is the role of Saindhava Lavana in Gandhakadi Lepa?
a. It enhances the antimicrobial property.
b. It acts as an anti-inflammatory agent.
c. It improves the texture of the skin.
d. It serves as a binding agent.

129. Which ingredient in Gandhaka Vati acts as a digestive stimulant by enhancing gastrointestinal motility?
a. Saindhava
b. Shuddha Gandhaka
c. Shunthi
d. Chanakamala

130. Gandhaka Vati is indicated for which of the following conditions?
a. Kushtha
b. Pama
c. Ajirna (indigestion)
d. Gandamala

131. Which of the following ingredients in Gandhaka Vati acts as an antacid?
a. Saindhava and Sauvarchala
b. Chanakamla and Muli Kshara
c. Shuddha Parada and Shuddha Gandhaka
d. Lavanga and Marica

132. What is the primary role of Saindhava and Sauvarchala in Gandhaka Vati?
a. Neutralizing excess stomach acid

b. Enhancing digestive fire (Agni)
c. Inhibiting bacterial growth
d. Providing antimicrobial effects

133. What is the recommended dose of Gandhaka Vati?
a. 250 mg
b. 500 mg
c. 1 g
d. 2 g

134. Which property of Gairika (red ochre) helps in managing skin infections in Visarpa Roga?
a. Anti-inflammatory
b. Antimicrobial
c. Astringent
d. Cooling

135. What is the primary use of Gairika Pradeha according to the therapeutic indications?
a. Pama
b. Ajirna
c. Visarpa Roga
d. Gandamala

136. Which component in Gairika Pradeha provides a cooling effect on the skin?
a. Shuddha Gairika
b. Ghrita
c. Both Shuddha Gairika and Ghrita
d. Neither Shuddha Gairika nor Ghrita

137. How is Gairika Pradeha absorbed into the body?
a. Through the gastrointestinal tract
b. Through the bloodstream
c. Through the skin
d. Through the lungs

138. What role does Ghrita play in Gairika Pradeha?
a. Antimicrobial
b. Cooling
c. Vehicle for topical application
d. Astringent

139. Which ingredient in Laghusuta Shekhara Rasa helps in digestion and managing Pittaja conditions?
a. Shuddha Gairika
b. Shunthi
c. Nagavalli Svarasa
d. Sitayukta Dugdha

140. What is the recommended dose range for Laghusuta Shekhara Rasa?
a. 100 mg to 250 mg
b. 250 mg to 500 mg
c. 500 mg to 750 mg
d. 750 mg to 1000 mg

141. Which property of Laghusuta Shekhara Rasa is beneficial for managing migraine with symptoms like photophobia and nausea (Suryavata)?
a. Analgesic
b. Anti-inflammatory
c. Cooling
d. Digestive

142. What is the therapeutic indication for Laghusuta Shekhara Rasa involving mental disorders due to Pitta imbalance?
a. Pittaja Sirashula
b. Ardhavabhedaka
c. Pittaja Unmada
d. Mukha Paka

143. Which anupana (vehicle) is recommended for Laghusuta Shekhara Rasa?
a. Warm Water
b. Sitayukta Dugdha (milk with sugar)
c. Honey
d. Ghee

144. Which of the following ingredients in Gairikadya Gutikanjana is used for its cooling and soothing effect?
a. Saindhava Lavana
b. Pippali
c. Shuddha Gairika
d. Tagar

145. What is the proportion of Pippali used in Gairikadya Gutikanjana?
a. 1 Part
b. 2 Parts
c. 4 Parts
d. 8 Parts

146. Which ingredient in Gairikadya Gutikanjana contributes antibacterial properties?
a. Shuddha Gairika
b. Saindhava Lavana
c. Pippali
d. Tagara

147. What therapeutic indication is Gairikadya Gutikanjana primarily used for?
a. Headache
b. Abishanda (eye conditions)
c. Skin infections
d. Stomach ailments

148. How are the metabolites and unabsorbed residues of Gairikadya Gutikanjana primarily eliminated from the eye?
a. Through the bloodstream
b. Via the digestive system
c. Through tear production and drainage into the nasolacrimal duct
d. Through the lymphatic system

149. Which condition is Gairika Rasakriya primarily indicated for?
a. Headache
b. Pittaja Netra Roga (Pitta-related eye conditions)
c. Skin infections
d. Stomach ailments

150. Which of the following ingredients in Gairika Rasakriya has antibacterial properties?
a. Nagaramotha
b. Shuddha Gairika
c. Saindhava Lavana
d. Gorochana

151. What is the proportion of each ingredient used in Gairika Rasakriya?
a. 1 Part each
b. 2 Parts each
c. 3 Parts each
d. 4 Parts each

152. Which ingredient in Gairika Rasakriya contributes to its cooling effect?
a. Nagaramotha
b. Shuddha Gairika
c. Saindhava Lavana
d. Gorochana

153. **How are the metabolites and unabsorbed residues of Gairika Rasakriya eliminated from the eye?**
   a. Through the bloodstream
   b. Via the digestive system
   c. Through tear production and drainage into the nasolacrimal duct
   d. Through the lymphatic system

154. **Which of the following is NOT an ingredient in Varnakara lepa?**
   a. Dhayamaka
   b. Pipala
   c. Nagakesara
   d. Pippali

155. **What is the primary therapeutic indication for Varnakara lepa?**
   a. Eye infections
   b. Joint pain
   c. Varna (skin conditions)
   d. Digestive disorders

156. **Which ingredient in Varnakara lepa is known for its ability to manage skin pigmentation disorders?**
   a. Dhayamaka
   b. Nagakesara
   c. Pipala
   d. Veta

157. **Which ingredient in Varnakara lepa is used for its anti-inflammatory properties?**
   a. Kasisa
   b. Amritasanga (Tutha)
   c. Dhayamaka
   d. Shuddha Gairika

158. **How are the metabolites and unabsorbed residues of Varnakara lepa primarily eliminated from the skin?**
   a. Through the bloodstream
   b. Via the digestive system
   c. Through natural processes such as sweating and shedding of skin cells
   d. Through the lymphatic system

Answers Keys

1.	b	2.	c	3.	c	4.	d	5.	c
6.	a	7.	c	8.	c	9.	c	10.	c
11.	c	12.	d	13.	a	14.	b	15.	d
16.	c	17.	c	18.	c	19.	c	20.	d
21.	c	22.	c	23.	b	24.	c	25.	c
26.	d	27.	c	28.	b	29.	a	30.	c
31.	c	32.	a	33.	b	34.	c	35.	c
36.	c	37.	b	38.	c	39.	b	40.	c
41.	c	42.	d	43.	b	44.	a	45.	c
46.	d	47.	c	48.	c	49.	c	50.	b
51.	b	52.	b	53.	a	54.	c	55.	b
56.	c	57.	c	58.	c	59.	b	60.	b
61.	d	62.	d	63.	b	64.	a	65.	d
66.	c	67.	d	68.	c	69.	d	70.	c
71.	b	72.	a	73.	d	74.	b	75.	b
76.	c	77.	d	78.	c	79.	c	80.	c
81.	b	82.	d	83.	c	84.	d	85.	a
86.	c	87.	c	88.	b	89.	b	90.	c
91.	c	92.	d	93.	c	94.	c	95.	c
96.	c	97.	d	98.	c	99.	b	100.	c
101.	b	102.	d	103.	c	104.	b	105.	d
106.	b	107.	b	108.	d	109.	a	110.	b
111.	b	112.	c	113.	c	114.	b	115.	b
116.	b	117.	b	118.	c	119.	c	120.	c
121.	a	122.	b	123.	b	124.	d	125.	a
126.	c	127.	c	128.	a	129.	c	130.	c
131.	b	132.	b	133.	b	134.	b	135.	c
136.	a	137.	c	138.	c	139.	b	140.	b
141.	b	142.	c	143.	b	144.	c	145.	c
146.	b	147.	b	148.	c	149.	b	150.	c
151.	a	152.	b	153.	c	154.	d	155.	c
156.	b	157.	c	158.	c				

Short Answer Questions (SAQ)

- Amritadi Guggulu
- Triphala Ghrita
- Bhallataka Guda
- Laghusutasekhara Rasa

Long Answer Questions (SAQ)

- Write the ingridents, dose and its therapeutic properties of Amritarishta.
- Toxicity of Bhallataka and its management.
- Write the Pharmacodynamics and Pharmacokinetics of Chyavanaprasha and its research updates.
- Expalin Gairikadya Malahara and its Research updates.

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CHAPTER 3

SINGLE DRUG (BHASMA, SHUDDHA & PISHTI)

3.1 Abhraka Bhasma

1. Reference: Rasatarangini, 10/39-42

धान्याभ्रकं समादाय रविक्षीरैर्विमर्दयेत्।
रविमूलदवैर्वापि दिनमेकं निरन्तरम्।।
ततः संशोषयेद् घर्मे गगनं कृतचक्रिकम्।
रविपत्रैश्च संवेष्ट्य सप्तवारं विधानतः।।
पुटेद् गजपुटेनैव रसतन्त्रविशारदः।
ततो न्यग्रोधमूलोत्थैः क्वाथैर्दद्यात्पुटत्रयम्।।
तद्वदम्भारसेनापि सप्तवारं पुटेद्भिषक्।
एवं स्वल्पैः पुटैरेव गगनं मृतिमाप्नुयात्।।

(Rasatarangini, 10/39-42)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Dhanyabhraka	—	1 Part
Arka	(L.)	Q.S. for Mardana
Nyagrodhamula Kvatha	(Rt.)	Q.S. for Mardana
Rambha Rasa	(Rz.)	Q.S. for Mardana

Procedure:

Take all the ingredients as required. First, triturate Dhanyabhraka well with Arka Kshira for one day. Form thin, flat chakrikas and dry them under the sun. Place these chakrikas in a Sharava Samputa and apply Sandhi Lepa. Then, administer Gaja Puta. Repeat this process seven times. Next, follow the same procedure, but use Nyagrodhamula Kvatha as the mardana dravya, repeating the process three times. In the final phase, use Kadali Kanda Svarasa as the mardana dravya and repeat the process seven times. After this, perform the bhasma pariksha (testing of the ash). If it passes, the Abhraka Bhasma is ready for internal administration.

Puta: Gajaputa.

2. Reference: Rasatarangini, Taranga 10/43-45 (Shataputi Vidhana)

क्षीरत्रयं काकमाची गोक्षुरः खरमञ्जरी।
वटप्ररोहो गोमूत्रं तुलसी कदलीशिका।।
एभिरभ्रं विमर्द्याथ दशवारं पृथक् पृथक्।
पुटत्पुटविटविधानज्ञः कर्मेणैक भिषग्वरः।।
शतधा पुटनादेवं रक्तोत्पलसमप्रभम्।
निश्चन्द्रं जायते भस्म सर्वदोष विवर्जितम्।। (R.T., 10/43-45)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Dhanyabhraka	—	1 Part
Arka	L.	Q.S. for Mardana
Vata Kshira	L.	Q.S. for Mardana
Snuhi Kshira	L.	Q.S. for Mardana
Kakamachi Rasa	Pl.	Q.S. for Mardana
Gokshura Kvatha	Fr.	Q.S. for Mardana
Apamarga Rasa	Pl.	Q.S. for Mardana
Vata Praroha Svarasa	A.R.	Q.S. for Mardana
Gomutra	—	Q.S. for Mardana
Tulasi Svarasa	Lf.	Q.S. for Mardana
Kadali	Rz.	Q.S. for Mardana

Procedure:

Take all the ingredients as required. First, triturate Dhanyabhraka well with Arka Kshira for one day. Form thin, flat cakrikas and dry them under the sun. Place these chakrikas in a Sharava Samputa and apply Sandhi Lepa. Then, administer Gaja Puta. Repeat this process ten times.

Next, follow the same procedure for all the remaining drava dravyas used as the mardana dravya, repeating the process ten times each. In total, 100 putas are done after all the processes. After this, perform the bhasma pariksha (testing of the ash). If it passes, the Abhraka Bhasma is ready for internal administration.

Puta: Gajaputa.

3. **Reference:** Ayurveda Prakasha, Adhyaya 2/132 (Sahasraputi Vidhana)

श्रीगोविन्दपादास्तु अन्यान्येव गगनमारकाणि भेषजानि लिखन्ति; यथा– अर्कदुग्धं 1, वटदुग्धं 2, सेहुण्डदुग्धं 3, घृतकुमारी 4, पञ्चाङ्गुलमूलपत्राणि 5, काकमाची 6, मुस्ता 7, वटप्ररोहः 8, बस्त-शोणितं 9, विल्वमूलपत्राणि 10, अग्निमन्थः 11, टिण्टुकः 12, पाटली 13, श्रीपर्णी 14, शालिपर्णी 15, पृश्निपर्णी 16, कण्टकारी 17, कदम्बः 18, बृहती 19, गोक्षुरः 20, तिलपर्णी 21, खरमञ्जरी 22, गुडः 23, सिद्धार्थको धवलः 24, पालङ्क्या 25, मालती 26, गोमूत्रम् 27, हरीतकी 28, धात्री 29, विभीतकः 30, तालीशपत्रं 31, चित्रकमूलपत्रं 32, जलकुम्भी 33, तालमूली 34, वृषः 35, वाजिगन्धा 36, अगस्त्यपत्रं 37, भृङ्गराजः 38, कदलीकन्दरसः 39, सप्तपर्णः 40, देवदारु 41, गुडूची 42, धत्तूरः 43, कासमर्दकः 44, मातुलानी 45, लोधः 46, तुलसी 47, दूर्वा 48, मूषकपर्णी 49, रजनी 50, दाडिमपल्लवा 51, घोण्टा 52, शङ्खपुष्पी 53, नागवल्ली 54, पिण्डीतगरं 55, श्वेतपुनर्नवा 56, हिलमोचिका 57, मण्डूकपर्णी 58, तिक्तिका 59, मदनः 60, इत्यादिभिर्मर्दनपुटनैरेकेनाप्यभ्रको मारणीयः। इति अभ्रकमारणीय-गणः। आभिर्यथालाभं सहस्रपुटा देयाः। यथासंख्यं च प्रत्येकं सप्तदश पुटाः प्रायशो भवन्ति। एवं सहस्रसंख्या पूर्यते।। इति सहस्रपुटि।।

(Ayurveda Prakasha, 2/132)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Abhraka	—	1 Part
Arka	L.	Q.S. for Bhavana
Vata	L.	Q.S. for Bhavana
Snuhi	L.	Q.S. for Bhavana
Kumari	Lf.	Q.S. for Bhavana
Eranda	Rf. & Lf.	Q.S. for Bhavana
Kakamachi	Pl.	Q.S. for Bhavana
Musta	Rz.	Q.S. for Bhavana
Vata	A.R.	Q.S. for Bhavana
Bastashonita	—	Q.S. for Bhavana
Bilva	Rt./ Lf.	Q.S. for Bhavana
Agnimantha	Rt./St. Bk	Q.S. for Bhavana
Shyonaka	Rt./St. Bk	Q.S. for Bhavana
Patala	Rt./St. Bk	Q.S. for Bhavana
Gambhari	Rt./St. Bk	Q.S. for Bhavana
Shaliparni	Pl.	Q.S. for Bhavana
Prishniparni	Pl.	Q.S. for Bhavana
Kantakari	Pl.	Q.S. for Bhavana
Kadamba	—	Q.S. for Bhavana
Brihati	Pl.	Q.S. for Bhavana
Gokshura	Pl.	Q.S. for Bhavana
Ajagandha	Pl.	Q.S. for Bhavana
Apamarga	Pl.	Q.S. for Bhavana
Guda	—	Q.S. for Bhavana
Shveta Sarsapa	Sd.	Q.S. for Bhavana
Palaka	Lf.	Q.S. for Bhavana
Malati	Fl.	Q.S. for Bhavana
Gomutra	—	Q.S. for Bhavana
Haritaki	P.	Q.S. for Bhavana
Amalaki	P.	Q.S. for Bhavana
Bibhitaki	P.	Q.S. for Bhavana
Talisa	Lf.	Q.S. for Bhavana
Citraka	Rt. Tr.	Q.S. for Bhavana
Jalakumbhi	Pl.	Q.S. for Bhavana
Talamuli	Rt. Tr.	Q.S. for Bhavana
Vasa	Lf.	Q.S. for Bhavana
Q.S. for bhavana		
Ashvagandha	Rt.	Q.S. for Bhavana
Agastya	Lf.	Q.S. for Bhavana
Bhringaraja	Pl.	Q.S. for Bhavana
Kadali	Rt. Tr.	Q.S. for Bhavana
Saptaparna	St. Bk.	Q.S. for Bhavana
Devadaru	Ht. Wd.	Q.S. for Bhavana
Guduchi	St.	Q.S. for Bhavana
Dhattura	Lf.	Q.S. for Bhavana
Kasamarda	Pl.	Q.S. for Bhavana
Matulunga	Fr.	Q.S. for Bhavana
Lodhra	St. Bk.	Q.S. for Bhavana
Tulasi	Pl.	Q.S. for Bhavana
Durva	Pl.	Q.S. for Bhavana
Musakaparni	Pl.	Q.S. for Bhavana
Rajani	Rz.	Q.S. for Bhavana
Dadima	Lf.	Q.S. for Bhavana
Ghonta	Fr.	Q.S. for Bhavana
Shankhapushpi	Pl.	Q.S. for Bhavana
Nagavalli	Fr.	Q.S. for Bhavana
Tagara	Pl.	Q.S. for Bhavana
Shveta Punarnva	Lf.	Q.S. for Bhavana
Hilamochika	Rt./Rz.	Q.S. for Bhavana
Mandukaparni	Pl.	Q.S. for Bhavana
Tiktika	Pl.	Q.S. for Bhavana
Madana	Fr.	Q.S. for Bhavana

Procedure:

Take all the ingredients as required. First, triturate Dhanyabhraka well with Arka Kshira for one day. Form thin, flat chakrikas and dry them under the sun. Place these cakrikas in a Sharava Samputa and apply Sandhi Lepa. Then, administer Gaja Puta. Repeat this process seventeen times.

Next, follow the same procedure for all the remaining drava dravyas used as the mardana dravya, repeating the process seventeen times each. In total, more than 1000 putas are done after all the processes. After this, perform the bhasma pariksha (testing of the ash). If it passes, the Abhraka Bhasma is ready for internal administration.

Puta: Gajaputa.

Dose: 125 mg to 375 mg.

Anupana: Honey, Ghee, Triphala Kvatha, Guduchi Svarasa, Adraka Svarasa.

Therapeutic Uses: Agnimandya, Grahani, Shvasa, Raktapitta, Kasa, Prameha, Pandu, Kesha patina, Tvakroga, Jara, Napumsakta, Kushtha, Pliha, Udara, Visha, Krimi Roga.

PHARMACOLOGICAL ACTIONS

1. **Rasayana:** Abhraka Bhasma is a potent rejuvenating substance that enhances vitality and promotes longevity at a cellular level.
2. **Hematogenic:** It aids in blood cell formation, improving hemoglobin levels and treating anaemia.
3. **Nervine Tonic:** Strengthens the nervous system, enhancing cognitive function and alleviating conditions like stress and anxiety.
4. **Cardioprotective:** Regulates blood pressure, improves circulation, and strengthens the heart muscle.
5. **Antioxidant:** Scavenges free radicals, preventing cellular damage and delaying aging.
6. **Immunomodulatory:** Enhances the immune system's function, boosting defense mechanisms against infections.
7. **Antacid:** Balances stomach acidity, relieving symptoms of hyperacidity and gastritis.
8. **Aphrodisiac:** Promotes sexual health and vitality, addressing issues like erectile dysfunction and low libido.
9. **Anti-inflammatory:** Reduces inflammation, providing relief from conditions such as arthritis and gastritis.
10. **Antidiabetic:** Helps regulate blood sugar levels and improve insulin sensitivity in managing diabetes mellitus.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	A Classical Review on Pharmaceutical and Analytical Study of Abhraka Bhasma	Mali Ramavtar, PG Scholar, Dept. of Rasashatra & Bhaishajya Kalpana, Govt. Ayurved College,Maharashtra, India	The review highlights the classical guidelines for Abhraka Shodhana, Dhanyabhraka, and Marana, emphasizing key aspects such as temperature patterns and the number of Puta. It suggests that further practical studies on Abhraka Bhasma are needed to establish standard operating procedures and define its analytical parameters.
2.	Synthesis and Characterization of Abhraka Bhasma prepared by Two Different Ayurvedic Methods— A Standardization Study	Manjiri Ranade, Reader, Sri Sai Ayurvedic Medical College, Aligarh, U.P., India.	Abhraka Bhasma is prepared through Shodhana and Marana processes, resulting in fine particles and significant changes in particle size and chemical composition, including elements like C, O, Si, Fe, K, Al, and Mg. Both preparation methods are validated by Ayurvedic tests. Further phase 2 and 3 clinical trials are needed to confirm the efficacy of Abhraka Bhasma in treating various conditions.
3.	Study of General Properties of Abhraka Bhasma: A Nanomedicine	Rambhadur P. Subedi, Department of Biological Sciences, Ramniranjan Jhunjhunwala College, Mumbai, Maharashtra	In the current study, chemical modifications of Abhraka Bhasma in the GI tract were analyzed. Acidic conditions led to significant changes in its absorbance pattern, with further modifications observed upon neutralization. These changes were primarily related to iron compounds. Additionally, while no distinct antibacterial properties were found, Abhraka Bhasma did inhibit yeast growth to some extent. Further in-depth studies are needed to better understand the physiological actions and components of Abhraka Bhasma.
4.	Pharmaceutical and Analytical Study of Abhraka Bhasma	Nandurkar Vishal Marotrao Associate Professor, Department of Rasashastra & Bhaishajya Kalpana, Shri K. R. Pandav Ayurved College, Dighori, Nagpur, Maharashtra, India.	Prepared samples of Abhraka Bhasma (AB-1, AB-2, AB-3) were evaluated using organoleptic and modern physico-chemical parameters. The samples exhibited consistent characteristics: lustrous, vermilion-colored, fine, crevice-filling, soft, smooth, smokeless, and tasteless. Analytical tests, including L.O.D., L.O.I., pH, conductivity, solubility, and elemental assays of Fe_2^+ and Fe_3^+, showed minimal variation, indicating uniform preparation procedures.

3.2 Svarna Makshika Bhasma

1. Reference: Rasendrasara Sangraha, 1/211-212

माक्षिकस्य चतुर्थांशं गन्धं दत्त्वा विमर्दयेत्।
उरुबूकस्य तैलेन ततः कुर्याच्च चक्रिकाम्।।
शरावसम्पुटे कृत्वा पुटेद् गजपुटेन तु।
सिन्दूराभं भवेद् भस्म माक्षिकस्य न संशयः।। (R.S.S., 1/211-212)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Shuddha Suvarna Makshika	—	1 Part
Shuddha Gandhaka	—	¼ Part
Eranda Taila	Ol.	Q.S. for Mardana

Procedure:

Take all the ingredients as required. First, triturate Shuddha Svarna Maksika and Shuddha Gandhaka triturated. Add Eranda Tailas marana drava dravya for one day. Form thin, flat chakrikas and dry them under the sun. Place these chakrikas in a Sharava Samputa and apply Sandhi Lepa. Then, administer Gaja Puta. This process is done by ten times. If more putas are needed, repeat this process until the bhasma passes the bhasmapariksha.

Puta: Gajaputa- 10 in numbers.

1. Reference: Rasa Tarangini, 21/19-20.

ताप्यं निम्ब्वम्लसम्पक्वं पुनर्निम्बूकवारिणा।
सम्पेष्य सम्पुटस्थन्तु पुटयेत् कृतचक्रिकम्।।
एवं दशपुटैरेव पञ्चतामेति माक्षिकम्।
रक्तोत्पलदलच्छायं जायते चातिशोभनम्।।

(R.T., 21/19-20)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Shuddha Suvarna Makshika	–	1 Part
Nimbu Svarasa	Fr.	Q.S. for Mardana

Procedure:

Take all the ingredients as required. First, triturate Shuddha Svarna Makshika with Nimbu Svarasa for one day. Form thin, flat chakrikas and dry them under the sun. Place these chakrikas in a Sharava Samputa and apply Sandhi Lepa. Then, administer Gaja Puta. Repeat this process for ten times or until the bhasma passes the bhasma pariksha.

Dose: 125 mg- 250 mg.

Anupana: Honey.

Therapeutic Uses: Pandu, Shotha, Prameha, Jirna Jvara, Rajayakshma, Anidra, Apasmara, Rajahkrichchhra, Kushtha, Arsha, Krimi.

PHARMACOLOGICAL ACTIONS

1. **Hepatoprotective**: Protects the liver from damage and improves its function.
2. **Antioxidant**: Scavenges free radicals, delaying aging and cellular damage.
3. **Anti-inflammatory**: Reduces inflammation, easing symptoms of arthritis and gastritis.
4. **Immunomodulatory**: Strengthens the immune system to combat infections and diseases.
5. **Antimicrobial**: Inhibits the growth of bacteria, viruses, and fungi, preventing infections.
6. **Antidiabetic**: Helps regulate blood sugar levels and improve insulin sensitivity.
7. **Anti-arthritic**: Reduces joint inflammation and pain in arthritis conditions.
8. **Nervine tonic**: Enhances cognitive function and nervous system strength.
9. **Cardioprotective**: Supports heart health by regulating blood pressure and circulation.
10. **Rejuvenative**: Revitalizes the body, enhancing vitality and promoting longevity.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	A Review on Therapeutic Application of Svarnamakshika Bhasma	Sruthi Nambiar, PG Scholar, Dept. of Rasashastra and Bhaishajya Kalpana, Sri Dharmasthala Manjunatheswara College of Ayurvedaand Hospital, Hassan, Karnataka, India	Svarnamakshika, a maharasa dravya and rasayana, is effective against various diseases. Properly processed Svarnamakshika bhasma acts broadly due to its nanoparticle form and inherent properties. It can be prescribed for many conditions, including in the weak, delicate, pregnant women, and children, with appropriate dosage and anupana. However, more clinical trials are needed to validate its effects.
2.	Physicochemical characterization of Ayurvedic bhasma (*Svarna makshika bhasma*): An approach to standardization	Sudhaldev Mohapatra Department of Rasa Shastra, Faculty of Ayurveda, Institution of Medical Sciences, Banaras Hindu University, U.P. India	This study aimed to fingerprint raw and processed Svarnamakshika (SM) using pharmacy techniques. SM was heated with lemon juice for 3 days, then processed with purified Gandhaka and lemon juice, and heated in 09* putas using 4 kg cow dung cakes per puta. Quality control tests ensured bhasma quality. X-ray Diffraction showed raw SM contains $CuFeS_2$, while SM bhasma has Fe_2O_3, FeS_2, CuS, and SiO_2. SEM analysis revealed uniformly arranged grains in SM bhasma (1-2 microns) compared to scattered grains in raw SM (6-8 microns). This study is the first to fingerprint SM bhasma using this method.
3.	Analytical study of raw *Svarna Makshika* (Chalcopyrite) and its *Bhasma* through TEM and EDAX	Sudhaldev Mohapatra Lecturer, Department of Rasa Shastra, A and U Tibbia College, Karol Bagh, New Delhi, India	In this study, SM and SM Bhasma were analyzed using Transmission Electron Microscope (TEM) and Energy Dispersive X-Ray Analysis (EDAX). The analysis identified iron, copper, and sulfur in SM, and additional trace elements like potassium, magnesium, aluminum, and silicon in SM Bhasma. TEM revealed a significant reduction in grain size from 5-10 microns in SM to 50-200 nm in SM Bhasma.

Sr.No.	Article Name	Author Name	Result
4.	Pharmaceutical and Anlytical Studies on Svarna Makshika Bhasma – An Ayurvedic Formulation	Devanathan. R, Centre for Advanced Research in Indian System of Medicine (CARISM), SASTRA University, Thanjavur-613401, Tamilnadu.	Shodhana and marana processes are crucial for converting raw Svarna Makshika into absorbable Svarna Makshika Bhasma. Although classics suggest 5-8 putas, 29 were needed in this study to achieve desired qualities. More putas reduce impurities and enhance therapeutic properties. The resulting smaller particle size improves absorption and assimilation, meeting both Ayurvedic and modern standards.

3.3 Svarna Bhasma

1. Reference: Rasendra Sara Sangraha, 1/255-256

शुद्धसूतं समं स्वर्णं खल्वे कृत्वा तु गोलकम्।
ऊर्ध्वाधो गन्धकं दत्त्वा सर्वतुल्यं निरुध्य च।।
त्रिंशद्वनोपलैर्दद्यात् पुटान्येवं चतुर्दश।
निरुत्थं जायते भस्म गन्धो देयः पुनः पुनः।।

INGREDIENTS USED (R.S.S., 1/255-256)

Drug Name	Part Used	Proportion
Shuddha Svarna	—	1 Part
Shuddha Parada	—	1 Part
Shuddha Gandhaka	—	3 Parts

Procedure:

Take Shuddha Parada and equal amounts of Shuddha Svarna (gold) and triturate them together in a mortar to form a homogeneous mixture, shaping it into a ball (golaka).

Place this ball with shuddha gandhaka both above and below it in sharava and seal it. Then, administer Puta for 14 times. Repeat this process until the bhasma passes the bhasma pariksha.

2. Reference: Rasamrita 3/16-18

शुद्धस्वर्णभवं चूर्णं तत्समं श्वेतमल्लकम्।।
कञ्चनारद्रवैर्मर्द्यं तुलसीस्वरसैस्तथा।
विधाय चक्रिकां शुष्कां ततो लघुपुटे पचेत्।।
द्वितीयादिपुटे देयं मल्लं पादमितं बुधैः।
अरुणाभं भवेद्भस्म हेम्नस्तु दशभिः पुटैः।। (Rasamrita, 3/16–18)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Shuddha Svarna	—	1 Part
Shveta malla	—	1 Part
Kanchanara Drava	St. Bk	Q.S. for Mardana
Tulasi Svarasa	Pl.	Q.S. for Mardana

Procedure:

Take all the ingredients as required. First, triturate Shuddha Svarna and Shuddha Shveta Malla triturated. Add Nimbu Kanchana rasa marana drava dravya for one day. Form thin, flat chakrikas and dry them under the sun. Place these chakrikas in a Sharava Samputa and apply Sandhi Lepa. Then, administer Laghu Puta. 2nd time Obtained ist puta product add 1/4th part of Shuddha Shveta Malla and triturated with tulsi svarasa. Then, administer Laghu Puta. This process is done by ten times. If more putas are needed, repeat this process until the bhasma passes the bhasma pariksha.

Dose: 15.5 to 62.5 mg.

Anupana: Honey, Butter.

Therapeutic Uses: Grahani, Amalpitta, Hikka, Pandu, Shwasa Roga, Jvara, Dhatu Kashaya, Apasmara, Rajayakshma, Buddhikshaya, Hridroga, Snayu-daurbalya, Sharira Varna, Unmada, Svarabeda, Visha, Vajikarana, Rasayana, Medhya, Smritivar-dhaka.

PHARMACOLOGICAL ACTIONS

1. **Immunomodulatory:** Regulates and strengthens the immune system.
2. **Antioxidant:** Scavenges free radicals and reduces oxidative stress.
3. **Nervine tonic:** Strengthens the nervous system and improves cognitive function.
4. **Cardioprotective:** Supports heart health and regulates blood pressure.
5. **Adaptogenic:** Helps the body adapt to stress and maintain balance.
6. **Anti-inflammatory:** Reduces inflammation and alleviates related symptoms.
7. **Rejuvenative:** Revitalizes the body and promotes longevity.
8. **Hematinic:** Enhances hemoglobin levels and promotes blood formation.
9. **Aphrodisiac:** Enhances sexual vigor, libido, and fertility.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Pharmaceutical Standardization of Svarna Bhasma (Incinerated Gold) by Adopting Traditional Method	Sanjay B. Khedekar, Research Lab, Dept. of RS & BK, SSAM & H, Hirawadi, Nashik, Dist. Nashik, Maharashtra, India.	In this study, Svarna Bhasma was prepared and analyzed to develop standard parameters. Three batches were made, following traditional procedures for Shodhana (purification) and Marana (incineration) with a specialized heating pattern. An 18% loss was observed after thirty subsequent putas, resulting in a finished product containing 52.33% elemental gold.
2.	Chemical characterization of incinerated gold (Svarna Bhasma)	Sanjay Khedekar, Dept. of RS & BK, SSAM & H, Nashik, MHA	Svarna Bhasma, prepared using traditional Ayurvedic Rasashastra methods, contains gold as the major element. Its particle size ranges from 1-10 μm and it has 52.33% elemental gold.
3.	Physicochemical Variation in Nanogold Based Ayurved Medicine Suvarna Bhasma Produced by Various Manufacturers Lead to Different In Vivo Bioaccumulation Profiles	Jayesh Bellare, Department of Chemical Engineering, Indian Institute of Technology Bombay, Powai, Mumbai - 400076, Maharashtra, India.	This study compared Suvarna Bhasma from five manufacturers, finding distinct morphological differences. Two samples were suspected to deviate from claimed Ayurvedic procedures. Varied particle structures among the samples led to different pharmacokinetic profiles in rat models. The study concludes that these differences imply varying efficacy and safety, advocating for stringent manufacturing control and quality assurance.
4.	Blood compatibility studies of *Svarna bhasma* (gold *bhasma*), an Ayurvedic drug	Willi Paul, Division of Biosurface Technology, Biomedical Technology Wing, Sree Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram, India	Svarna bhasma, a therapeutic gold nanoparticle with a crystallite size of 28–35 nm and 90% purity, shows promise for clinical use due to its low negative zeta potential and absorption in the small intestine. Its nano-size facilitates uptake into organs through blood, suggesting its potential for targeted therapy. The standardized blood compatibility studies reinforce its safety profile and support its application in medicine. These protocols could serve as screening tests for bhasma preparations worldwide.

3.4 Rajata Bhasma

1. Reference: Rasatarangini, 16/17-21

कर्षद्वयमितं तारं विशुद्धन्तु समाहरेत्।
रसेश्वरं तारतुल्यं निर्मलञ्च हरेद्भिषक्।।
खल्वे सम्पेष्य यत्नेन पिष्टिकां कारयेत्ततः।
निम्बूकस्वरसं दत्त्वा दिनमेकं सुपेषयेत्।।
ततः प्रक्षालयेत्कामं सलिलेन भिषग्वरः।
शुद्धं सौगन्धिकं तुल्यं तथैव नटभूषणम्।।
निक्षिप्य चाथ सम्पेष्य श्लक्ष्णचूर्णञ्च कारयेत्।
शरावसम्पुटे न्यस्य पुटेत्स्वल्पपुटे ततः।।
एवं पुटत्रयेणैव रजतं मृतिमाप्नुयात्।
भस्म सञ्जायते चैवं रक्तोत्पलसमप्रभम्।।

(Rasatarangini, 16/17-21)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Shuddha Rajata	—	24 gms
Shuddha Parada	—	24 gms
Nimbu Svarasa	Fr.	Q.S. for Mardana
Shuddha Gandhaka	—	24 gms
Shuddha Haratala	—	24 gms

Procedure :

Take all the ingredients as required. First, triturate Shuddha Rajata and Shuddha Parada to form pishti. Add Nimbu Svarasa, triturate for one day, and wash with water. The next day, add Shuddha Gandhaka and Shuddha Haratala and triturate well. Administer three Laghuputa. If more putas are needed, repeat this process until the bhasma passes the bhasma pariksha.

2. Reference: Rasatarangini, 16/37-40

समाहरेत्सुविमलं तारपत्रकणाच्चयम्।
निम्बूकद्रवसंशुद्धं निरम्लाकृतमिङ्गुलम्।।
तारद्विगुणितं दत्त्वा पिष्ट्वा चूर्णञ्च कारयेत्।
ऊर्ध्वपातनयन्त्रेण पचेत्पाकविधानवित्।।
भूयो भूयः पचेद्यावद्रजतं मृतिमाप्नुयात्।
अधःस्थं सुमृतं तारं कृष्णाभमतिसुन्दरम्।।
आहरेदूर्ध्वसंस्थन्तु रसेशञ्चातिनिर्मलम्।
एवं मृतं चन्द्रलोहं तत्तद्योगेषु योजयेत्।।

(Rasatarangini, 16/37-40)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Shuddha Rajata	—	1 Part
Shuddha Hingula	—	2 Part
Nimbu Svarasa	Fr.	Q.S. for Mardana

Procedure:

Take all the ingredients as required. First, triturate Shuddha Rajata and Shuddha Hingula triturated. Add Nimbu Svarasa as marana drava dravya for one day. Form thin, flat chakrikas and dry them under the sun. Place these chakrikas in a Sharava Samputa and apply Sandhi Lepa. Then, administer Kukkuta Puta, for 14 in

numbers. If more putas are needed, repeat this process until the bhasma passes the bhasma pariksha.

Puta: Kukkuta Puta-14 in numbers.

Dose: 125 mg.

Anupana: Chitraka Mula Kashaya, Parpataka Kashaya, Ushira Kashaya, Brahmi Rasa, Honey.

Therapeutic Uses: Shosha, Dhatu Kshaya, Prameha, Madatyaya, Visha, Jwara, Pitta Roga, Pliha Roga, Buddhimaandya, Garbhashaya Dosa, Apasamara.

PHARMACOLOGICAL ACTION

1. **Antimicrobial:** Rajata Bhasma possesses antimicrobial properties, making it effective against a wide range of microorganisms including bacteria, viruses, and fungi. It can be used to treat various infections and promote wound healing.
2. **Antioxidant:** Silver, the main component of Rajata Bhasma, exhibits antioxidant activity. It helps in scavenging free radicals and reducing oxidative stress, thereby protecting cells and tissues from damage caused by reactive oxygen species.
3. **Anti-inflammatory:** Rajata Bhasma has anti-inflammatory properties, which can help reduce inflammation and alleviate symptoms associated with inflammatory conditions such as arthritis, gastritis, and skin disorders.
4. **Immunomodulatory:** Some studies suggest that Rajata Bhasma may have immunomodulatory effects, meaning it can modulate the immune response. It can enhance immune function, making the body more resilient to infections and diseases.
5. **Hematinic:** Rajata Bhasma is considered a hematinic, meaning it helps in the formation of blood and improves hemoglobin levels. It can be beneficial in the treatment of anemia and other blood-related disorders.
6. **Nervine tonic:** In Ayurveda, Rajata Bhasma is also known for its nervine tonic properties, which can help strengthen the nervous system and improve cognitive function. It may be used to treat neurological disorders and promote overall mental well-being.
7. **Cardioprotective:** Some research suggests that Rajata Bhasma may have cardioprotective effects, helping to maintain cardiovascular health by regulating blood pressure, reducing cholesterol levels, and improving heart function.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Pharmaceutical Study of Rajata Bhasma by Two Different Methods	Dr. Diksha Sharma, P.G. Department of Rasa Shastra and Bhaishajya Kalpana, R.G.G.P.G. Ayurvedic College, Paprola, H.P.	Two batches of Rajata bhasma, prepared differently but yielding similar results, were analyzed. Rajata Bhasma I used Shudha Rajata Patra, Shuddha Parada, Shuddha Gandhaka, Shuddha Harataala, and was levigated with Nimbu Svarasa, while Rajata Bhasma II used Shuddha Rajata Patra, Samaguna Kajjali, and was levigated with Ghritakumari Svarasa. Rajata Bhasma I underwent 18 Laghu Putas, and Rajata Bhasma II underwent 17, both resulting in black bhasma with yields of 84.2% and 95%, respectively.
2.	Therapeutic Potential of Rajata (Silver) Bhasma: A Review	Kajree Pardeshi, PG Scholar, Department of Rasashastra and Bhaishajya Kalpana, SDMCA Hassan, Karnataka, India	Adherence to classical guidelines ensures the non-toxicity of metal and mineral medicines like Rajata bhasma. It's widely used in formulations for systemic disorders, especially in neurological, psychological, infertility, and infectious conditions, owing to its proven efficacy and antimicrobial properties. Although ancient texts document its therapeutic uses, clinical trials are necessary to validate its efficacy across disorders.
3.	Analytical Study of Rajata Bhasma w.s.r. to Ayurvedic and Modern Parameters	Pritika, Dept. of Rasa Shastra & Bhaishajya Kalpana, Babe ke Ayurvedic College and Hospital, Daudhar, Moga,Punjab, India.	The Rajata bhasma has successfully passed Bhasma pariksha tests, including Varitaratva, Rekhapurnata, Nishchandrata, and Shlakshanatva, ensuring its safety and efficacy. This validates the pharmaceutical procedures outlined in Rasa Vaidya, making the bhasma safe for therapeutic use. Analytical studies support these findings, confirming the meticulous preparation methods employed.
4.	Standardization of Rajat Bhasma Prepared with the Classical Method of Rasendra Sara Sangraha	Khobragade Vaishali Mahadeorao, Associate Professor, Ph.D. Scholar, Department of Rasashastra and Bhaishajyakalpana, R.A. Podar Ayurvedic Medical College, Worli Mumbai, Maharashtra, India.	Statistical analysis of physico-chemical and XRF results across three batches of Rajata Bhasma revealed minimal Standard Deviation. This indicates the effectiveness of pharmaceutico-analytical methods employed for quality control and standardization, aligning with the guidelines of Rasendrasara Sangraha.

3.5 Lauha Bhasma

1. Bhanu Paka

Reference: Rasatarangini, 20/22-24

विमलं खलु लौहन्तु सलिलक्षालितं भिषक्।
त्रिफलाक्वाथसंयुक्तं ततः खल्वे निधापयेत्।।
निदाघे तु निधायाथ भानोः प्रखरभानुभिः।
शोषयेद्भिषजां वर्यः कुर्यादेवं तु सप्तधा।।
भानुपाके लौहतुल्या त्रिफला द्विगुणं जलम्।
पादावशेषितञ्चाथ वराक्वाथं प्रयोजयेत्।।

(Rasatarangini, 20/22-24)

Ingredients Used

Drug Name	Part Used	Proportion
Shuddha Loha Churna	–	1 Part
Triphala Kvatha	P.	1 Part

Method of Bhanupaka: Triphala Kvatha is prepared by adding two parts of water and reducing it to 1/4 part of water. Loha is mixed with Triphala Kvatha and kept under sun till the fluid gets evaporated. This should be repeated 7 times.

2. Sthali Paka

Reference: Rasatarangini, 20/26-28

भानुपाकविपक्वन्तु लौहं प्रक्षालयेदलम्।
ततः स्थाल्यां तु विन्यस्य चुल्लिकायां निधापयेत्।।
वराक्वाथेन सुपचेदतिवेलं खराग्निना।
शोषयेत्सलिलं यत्नाल्लौहकर्मविचक्षणः।।
स्थालीपाके त्रिगुणिता वरा षोडशिकं जलम्।
अष्टभागावशिष्टञ्च क्वाथमानं विधीयते।।

(Rasatarangini, 20/26-28)

Ingredients Used

Drug Name	Part Used	Proportion
Bhanu Paka Lauha	–	1 Part
Triphala	P.	3 Parts
Water for Decoction	–	48 Parts
Reduced to	–	6 Parts

Method of Sthali Paka: Loha Churna,a processed with Bhanupaka is washed with water and kept in a Sthali and Triphala Kvatha is added and heated on Tivragni till the moisture evaporates.

3. Putapaka Method

Reference: Rasatarangini, 20/31-39

रसादिभिर्भेषजानां खल्वे लौहं विमर्दितम्।
पुटस्थं पच्यते यस्मात् पुटपाकस्ततः स्मृतः।।
स्थालीपाकविपक्वन्तु लोहं प्रक्षालयेत्ततः।
यथादोषौषधोत्थेन रसेन क्वथितेन वा।।
लोहखल्वे सुसम्पेष्य चक्रिकाः कारयेत्ततः।
आतपे खलु संशोष्य मृच्छरावे तु विन्यसेत्।।
शरावेण पिधायाथ दृढं सन्धिं प्रलेपयेत्।
वनानीतैः करीषैर्वा द्युत्पलैर्हस्तपिण्डितैः।।
पुटेद् गजपुटेनेह पुटपाकक्रियापटुः।
स्वाङ्गशीतं ततो ज्ञात्वा सम्पुटन्तु समाहरेत्।।
पुनः पूर्ववदेवेह दत्त्वा क्वाथोदकं पुनः।
सम्पेष्य सम्पुटे कृत्वा पुटेत्पुटविधानवित्।।
सहस्रवारमथवा शतवारमथापि वा।
षष्टिवारं पुटेद्वापि लौहं गुणविवृद्धये।।
गुणोदयो भवत्येवं पुटनादुत्तरोत्तरम्।
एवं पुटविपक्वन्तु लोहं सुमृतिमाप्नुयात्।।
पुटपाके वरादीनि यथादोषौषधानि तु।
लौहतुल्यानि गृह्णीयात् पुटपाककलापटुः।।
त्रिफलापुटितं लौहं सर्वत्र विनियोजयेत्।।

(Rasatarangini, 20/31-39 और 52)

Ingredients Used

Drug Name	Part Used	Proportion
Sthali Paka Loha	—	1 Part
Triphala	P.	1 Part
Water for decoction	—	2 Parts
Reduced to	—	1/4th part of water

Puta: Gajaputa.

Method of Putapaka: Loha Churna processed with Sthali Paka is washed with water and mixed with Triphala Kvatha and ground well. Thin flat cakrikas are prepared, dried and placed in Sarava Samputa.The Sandhi is sealed, dried and subjected to Gaja Puta.

Dose: 120-250 mg.

Anupana: Honey, Ghee, Trikatu Churna, Haridra Rasa.

Therapeutic Uses: Atisara, Shula, Amalapitta, Udararoga, Kamala, Pandu, Krimi, Medodosha, Prameha, Pliha Roga, Shotha, Svasa, Kushtha.

Pharmacological Actions

1. **Hematopoietic**: Lauha Bhasma is renowned for its hematopoietic properties, meaning it helps in the formation of red blood cells. It contains iron in a bioavailable form, which can contribute to the treatment of anemia and other blood-related disorders.
2. **Rejuvenative (Rasayana)**: In Ayurveda, Lauha Bhasma is considered a Rasayana, or a rejuvenating substance. It is believed to enhance vitality, energy levels, and overall health when taken in the proper dosage and under the guidance of a qualified practitioner.
3. **Digestive**: Lauha Bhasma is known to stimulate the digestive fire (Agni) and improve digestion. It can be beneficial in conditions like indigestion, loss of appetite, and malabsorption syndromes.

4. **Anti-inflammatory**: Lauha Bhasma exhibits anti-inflammatory properties, which can help in reducing inflammation in various parts of the body. This action is particularly useful in conditions involving joint pain, swelling, and inflammatory skin disorders.
5. **Antioxidant**: Iron is known to have antioxidant properties, and Lauha Bhasma, being a source of iron, can help in combating oxidative stress and free radical damage in the body. This action is crucial for overall health and may contribute to the prevention of various chronic diseases.
6. **Immunomodulatory**: Some studies suggest that Lauha Bhasma may have immunomodulatory effects, meaning it can regulate the immune system. This property can be beneficial in boosting immunity and fighting off infections.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Pharmaceutical and Analytical Study on Lauha Bhasma	Rajendraprasad M., Lecturer, Department of Rasashastra, JSS Ayurveda Medical College, Mysore, Karnataka.	The pharmaceutical and analytical study on lauha bhasma suggests that it should undergo both samanya shodhana and vishesha shodhana for proper formation, purifying the iron and rendering it brittle. Trividha paka process enhances its properties and reduces particle size for better absorption. Ayurvedic parameter tests like Apunarbhava, Nirutta, and the Namburi Phased Spot Test confirm the fineness of Lauhabhasma, aiding in quality standardization.
2.	Pharmaceutical study of Lauha Bhasma	Neetu Singh, K. R. C. Reddy, Department of Rasa Shastra, Faculty of Ayurveda, Institute of Medical Sciences, Banaras Hindu University, Varanasi, Uttar Pradesh, India	During the putapaka process, an electric muffle furnace (EMF) was utilized. Two batches were studied: Batch I maintained a temperature of 800°C, while Batch II maintained 600°C. This aimed to validate marana process and determine an ideal temperature for Lauha Bhasma preparation. After 20 puta at 600°C, Lauha Bhasma was properly prepared, exhibiting characteristic features like "pakva jambu phala varna" and varitar. However, at 800°C, the process faced difficulties, resulting in hard and brassy yellow pellets, requiring a temperature decrease for desired coloration.
3.	Standardization of Lauha Bhasma	Dr. Jadhao Ujwala Ashokrao, Assistant Professor, Department of Rasa-Shastra & B. K. Govt. Ayurved College, Nanded, Maharashtra, India.	This research details the pharmaceutical processes of Lauha shodhana and Lauha marana, along with physicochemical analysis of Lauha bhasma, offering insights for future studies. The method involved mixing Hingula with Shuddha lauha churna, triturating with Kumari Svarasa, and subjecting to Gajaputa. Observations recorded color changes and texture transition from hard to soft, fine powder, with weight reduction after each puta.

3.6 Tamra Bhasma

Reference: Sharngadhara Samhita, Madhyama Khanda, 11/ 28-35

सूक्ष्माणि ताम्रपत्राणि कृत्वा संस्वेदयेद् बुधः।
वासरत्रयमम्लेन ततः खल्वे विनिक्षिपेत्।।
पादांशं सूतकं दत्वा याममम्लेन मर्दयेत्।
तत उद्धृत्य पत्राणि लेपयेद् द्विगुणेन च।।
गन्धकेनाम्लघृष्टेन तस्य कुर्याच्च गोलकम्।
ततः पिष्ट्वा च मीनाक्षीं चाङ्गेरीं वा पुनर्नवाम्।।
तत्कल्केन बहिर्गोलं लेपयेदङ्गुलोन्मितम्।
धृत्वा तद्गोलकं भाण्डे शरावेण च रोधयेत्।।
बालुकाभिः प्रपूर्याथ विभूतिलवणाम्बुभिः।
दत्वा भाण्डमुखे मुद्रां ततश्चुल्ल्यां विपाचयेत्।।
क्रमवृद्धाग्निना सम्यग्यावद्यामचतुष्टयम्।
स्वाङ्गशीतलमुद्धृत्य मर्दयेत्सूरणदृवैः।।
दिनैकं गोलकं कुर्यादर्धगन्धेन लेपयेत्।
सघृतेन ततो मूषां पुटे गजपुटे पचेत्।।
स्वाङ्गशीतं समुद्धृत्य मृतं ताम्र शुभं भवेत्।

(Sha. S.M., 11/28-35)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Shuddha Tamra Patra	—	1 Part
Nimbu Rasa	Fr.	Q.S. for Svedana
Shuddha Parada	—	1/4th Part
Gandhaka	—	2 Part
Changeri	Pl.	Q.S. for Lepana
Rakta Punarnava	St. Tr.	Q.S. for Mardana
Shuddha Gandhaka	—	½ Part
Ghrita	—	Q.S.

Procedure:

The fine tamra leaves are subjected to svedana with nimbu svarasa for three days using a dola yantra. After this, one-fourth shudhha parada and nimbu svarasa are triturated together for one yama (approximately three

hours). This causes the mercury to adhere to the tamra leaves.

Next, take double the amount of shuddha gandhaka with nimbu svarasa and triturate it and apply it to the copper leaf and make a ball of it. After this, grind minakshi dravya, Changeri or punarnava and apply thick paste on top of this ball and then mix ash and salt in water and fill the pot with it. Then, close the lid, put it on the stove and keep it Manda, Madhya, and Tivra until it cools down. Remove the balls from the pot when they cool down and make a ball by triturating it with a Jimikanda rasa the next day. Then take half Shuddha Gandhaka from Tamra and apply it to the Tamra ball in ghee. And sharava samputa is done and the Gaja Puta is given.

Dose: 31.25 to 62.5 mg.

Anupana: Trikatu Kashaya, Ghee, Honey, Duralabha Kvatha, Adraka Rasa, Guduchi Rasa.

Therapeutic Uses: Udararoga, Sthaulya, Jalodara, Shotha, Vataroga, Kaphapitta Roga, Visa, Rajayakshma, Kasa, Shvasa, Netra Roga, Kushtha, Parinama Shula, Shula, Jvara, Gulma, Pliha Yakrit Roga, Meha, Kshaya, Agnimandya, Grahani.

PHARMACOLOGY

1. Naga Bhasma, derived from purified lead (Shuddha Tamra Patra), Gandhaka, and other ingredients, possesses diverse therapeutic properties.
2. Traditional indications include abdominal disorders (Udararoga), obesity (Sthaulya), edema (Shotha), respiratory conditions (Kasa, Shvasa), eye disorders (Netra Roga), skin diseases (Kushtha), and various metabolic disorders (Meha, Kshaya).
3. Its pharmacological actions may include anti-inflammatory, anti-asthmatic, anti-diabetic, analgesic, and immunomodulatory effects.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Standard manufacturing procedure of Tamra Bhasma	Chandrashekhar Y., PhD Scholar, Department of Rasa Shastra and Bhaishajya Kalpana including Drug Research, Institute for Post Graduate Teaching and Research in Ayurveda, Gujarat Ayurved University, Jamnagar, Gujarat, India.	Classical methods were used, including specific temperature profiles for Puta in an electrical muffle furnace. 483.4 g of black cupric sulfide (TB) was obtained from 500 g of Tamra after three Putas. X-ray diffraction confirmed the final product. P3. article size analysis revealed 10% below 2µm. Inductive coupled plasma - atomic absorption spectrometry indicated 58.56 wt% copper and 22.48 wt% sulphur, along with traces of arsenic, lead, zinc, mercury, and manganese.
2.	Review of Research works done on *Tamra Bhasma* [Incinerated Copper] at Institute for Post-Graduate Teaching and Research in Ayurveda, Jamnagar, Gujarat, India	Swapnil Y. Chaudhari PG Scholar, Department of Rasa Shastra and Bhaishajya Kalpana including Drug Research, Institute for Post Graduate Teaching and Research in Ayurveda, Gujarat Ayurved University, Jamnagar, Gujarat, India	Tamra Bhasma was found safe at Therapeutic Equivalent Dose (TED) levels in clinical and experimental studies. Somanathi Tamra Bhasma showed superiority over Tamra Bhasma in pharmaceutical, pharmacological, and clinical aspects. Clinical efficacy was demonstrated in various conditions with satisfactory responses and no adverse effects reported. Further well-stratified studies are suggested for a larger population.
3.	Analytical Study of Tamra Bhasma	Rugmini R.K., PG Scholar final year, Department of Rasa Shastra and Bhaishajya Kalpana, S.V. Ayurvedic College, Tirupati, A.P.	Tamra Bhasma, prepared using classical methods, was analyzed using ancient and modern parameters, including XRD, SEM, EDS, PSA, ZP, UV, and FTIR. Results showed major peaks of HgS, CuS, and a minor peak of CuO in XRD, while SEM displayed irregular shaped flakes. EDS confirmed significant presence of O, S, Cu, and Hg. Particle size was 2.2 nm with a Zeta Potential of -44.2 mV. UV exhibited maximum absorption at 574 nm, and FTIR revealed 27 peaks. These parameters are crucial for qualitative and quantitative Bhasma analysis.

3.7 Vanga Bhasma

1. Reference: Ayurveda Prakasha, 3/179-180

अथ भस्मसमं तालं क्षिप्त्वाऽम्लेन विमर्दयेत्।
ततो गजपुटे पक्त्वा पुनरम्लेन मर्दयेत्।।
तालेन दशमांशेन याममेकं ततः पुटेत्।
एवं दशपुटैः पक्वं वङ्गं भवति मारितम्।।

(Ayu. P., 3/179-180)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Shuddha Vanga Jarita	–	1 Part
Shuddha Haratala	–	1 Part
Nimbu Nira	Fr.	Q.S. for Mardana

Procedure:

Take all the ingredients as required. First, triturate Vanga Jarita and Shuddha Haratala triturated. Add Nimbu Svarasa marana drava dravya for one day. Form thin, flat chakrikas and dry them under the sun. Place these cakrikas in a Sharava Samputa and apply Sandhi Lepa. Then, administer Gaja Puta. 2nd time Obtained ist puta product add 1/10th part of Shuddha Haratala and triturated with Nimbu Svarasa. Then, administer Gaja Puta. This process is done by ten times. If more putas are needed, repeat this process until the bhasma passes the bhasma pariksha.

2. Reference: Rasamrita, Adhyaya-3/94

स्वरसेन कुमार्यास्तु वर्या: क्षीरसरेण वा।
विमर्द्य चक्रिका: कृत्वा ह्यर्धेभाख्ये पुटे पचेत्।।
एवं सप्तपुटैर्वङ्गं मृतं भवति निश्चितम्। (Rasamrita, 3/94-95½)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Jarita Vanga	–	1 Part
Kumari Svarasa	Lf.	Q.S. for Mardana

Procedure:

Take all the ingredients as required. First, triturate Jarita Vanga with Kumari Svarasa for one day. Form thin, flat chakrikas and dry them under the sun. Place these chakrikas in a Sharava Samputa and apply Sandhi Lepa. Then, administer Ardha Gaja Puta. Repeat this process until the bhasma passes the bhasma pariksha.

Puta: Ardha Gaja Puta.

Dose: 125 to 250 mg.

Anupana: Guduchi Svarasa, Honey, Ghee, Haridra Rasa.

Therapeutic Uses: Kasa, Shvasa, Kapharoga, Medodosha, Prasveda, Kshaya, Pandu, Krimi, Prameha, Garbhashayacyuti, Shveta Pradara, Raktapradara, Agnimandya, Aruchi, Buddhimandata, Vrana, Svapnadosha.

PHARMACODYNAMICS

1. Vanga Bhasma, derived from purified tin (Shuddha Vanga Jarita) and Shuddha Haritala, exhibits versatile therapeutic properties.
2. Traditional indications include respiratory conditions (Kasa, Shvasa), disorders of Kapha origin, obesity (Medodosha), excessive sweating (Prasveda), anaemia (Pandu), worms (Krimi), diabetes (Prameha), female reproductive disorders (Shveta Pradara, Raktapradara), digestive weakness (Agnimandya), and cognitive impairment (Buddhi mandata).
3. Its pharmacological actions may include anti-inflammatory, anti-asthmatic, anti-diabetic, hematinic, and neuroprotective effects.

PHARMACOKINETICS

1. Administered orally at a dose of 125 to 250 mg, Vanga Bhasma undergoes absorption in the gastrointestinal tract.
2. Distribution throughout the body facilitates its therapeutic effects on various organs and systems.
3. Metabolism and excretion pathways may vary based on individual factors and the formulation's composition.
4. Anupana (adjuvant) of Guduchi Svarasa, Honey, Ghee, or Haridra Rasa may enhance absorption and therapeutic efficacy.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Analytical study of Vanga Bhasma	Piyush Chaudhary, Astt. Professor, Deptt. of Rasa Shastra, Dayanand Ayurveda College, Jalandhar, Punjab, India	The present study reaffirms that Bhasma are nano-sized particles with a long history of use in Ayurveda. Specifically, Vanga Bhasma is an organometallic compound containing a Sn-C bond and tin oxide (SnO_2) as the major phase. The preparation process incorporates various micro-elements essential for the body, sourced from herbal ingredients used in different sub-processes of Bhasma preparation.
2.	Pharmaceutical and Analytical studies on Vanga Bhasma: Anupdated Review	Pritika Devi, Assistant Professor, Dept. of Rasa Shastra & Bhaishjya Kalpana, Babe Ke Ayurvedic Medical College & Hospital, Daudhar, Moga, Punjab, India	This paper compiles different Bhasma preparation methods and their analytical reports for future reference. Minor variations exist in pharmaceutical methods across studies. Establishing a standard operating procedure for Vanga Bhasma is necessary to assess its safety and efficacy and ensure global recognition of Ayurvedic traditional methods.

Sr.No.	Article Name	Author Name	Result
3.	Pharmacetico-Analytical Study of Vanga Bhasma	Dr. Tanuj Bhatia, Assistant Professor, Department of Rasa Shastra, Saraswati Ayurved Hospital and Medical College, Gharuan, Mohali, Chandigarh.	After Bhavana, Vanga experienced a weight gain of 15.7%, attributed to solid sediments from Shuddha Hingula and Aloe vera svarasa. The application of parallel force during processing breaks bonds between drug particles, forming new organometallic compounds, leading to Vanga's colour change from black to dark purple. Repeated levigation reduces particle size through comminution force, with liquid media volume varying by season, levigation vigor, and material particle size. Marana yields Bhasma, an assimilable form of metal and minerals for internal use. Specific liquid media are recommended for bhavana in different Bhasma preparations. Ten ardha gaja puta cycles were utilized to achieve desired siddhi lakshanas.

3.8 Naga Bhasma

Reference: Sharngadhara Samhita, Madhyama Khanda, 11/ 38-39

तत्तुल्यां च मनःशिलाम्।
काञ्जिकेन द्वयं पिष्ट्वा पचेद् दृढपुटेन च।
स्वाङ्गशीतं पुनः पिष्ट्वा शिलया काञ्जिकेन च।।
पुनः पुटेच्छ्रावाभ्यामेवं षष्टिपुटैर्मृतिः।

(Sha. S.M., 11/38-39)

Ingredients Used

Drug Name	Part Used	Proportion
Jarita Naga	–	1 Part
Shuddha Manahshila	–	1 Part
Kanjika	–	Q.S. for Mardana

Procedure:

Take all the ingredients as required. First, triturate Jarita Naga and Shuddha Manahshila is triturate well. Add with Kanjika as mardana drava dravya and triturate it properly. Form thin, flat chakrikas and dry them under the sun. Place these chakrikas in a Sharava Samputa and apply Sandhi Lepa. Then, administer Puta. From the 2nd process shuddha manahshila is added only 1/4th part. Repeat this process until the bhasma passes the bhasma pariksha.

Note : from 2nd Puta onwards Manahshila is added in 1/4th.

Dose: 62.5 to 125 mg.

Anupana: Haridra Svarasa, Jambu Svarasa.

Therapeutic Uses: Atisara, Grahani, Gulma, Arsha, Prameha.

Pharmacodynamics

- Naga Bhasma, derived from Jarita Naga (processed lead) and Manahshila, exhibits therapeutic properties.
- Traditionally indicated for conditions like diarrhea, gastrointestinal disorders, abdominal tumors, hemorrhoids, and diabetes.
- Its pharmacological actions may include anti-diarrheal, anti-inflammatory, anti-tumor, and anti-diabetic effects.

Pharmacokinetics

- Administered orally at a dose of 62.5 to 125 mg, Naga Bhasma undergoes absorption in the gastrointestinal tract.
- Distribution throughout the body facilitates its therapeutic effects on various organs and systems.
- Metabolism and excretion pathways may vary based on individual factors and the composition of the formulation.
- Anupana (adjuvant) of Haridra Svarasa and Jambu Svarasa may enhance absorption and therapeutic efficacy.

Research Updates

Sr.No.	Article Name	Author Name	Result
1.	Standardization of Naga Bhasma prepared by two different Bhavana Dravya	Ashish Verma PhD Scholar (Ayurvedic Pharmaceutical Sciences), Department of Rasashastra and Bhaishajya Kalpana, Institute for Post Graduate Teaching & Research in Ayurveda (IPGT & RA), Gujarat Ayurved University (GAU), Jamnagar-361008, Gujarat, India	Three batches of each group were prepared. Following Shodhana, Manahshila showed an average weight increase of 8.83%, with levigation requiring 1600 ml of Adaraka Svarasa. NBAD and NBAS groups exhibited average weight increases of 12.57% and 18.55%, respectively. Bhavana necessitated an average of 181.33 ml of Calatropis procera latex and 182.66 ml of leaf juice. Naga Bhasma, with a grey color, was obtained after 10 Puta in EMF. Both latex and leaf juice showed similar pharmaceutical and analytical characteristics. Thus, using Arkapatra Svarasa for Naga Bhasma preparation is recommended due to considerations of scale, cost, labour, and drug availability.

Sr.No.	Article Name	Author Name	Result
2.	Pharmaceutico-Analytical Study of Naga Bhasma	Zade Shveta, Dept. of Rasa Shastra & Bhaishajya Kalpana, M. S. Ayurved College, Kudwa, Gondia, India	The present study aims to analyze Naga Bhasma both qualitatively and quantitatively using modern physicochemical techniques, including metallography and X-ray testing, showing good results.
3.	A Metallurgical Study of Naga Bhasma	Dev Nath Singh Gautam Department of Rasa Shastra, Faculty of Ayurveda, IMS, BHU, Varanasi, Uttar Pradesh, India	The metallographic study showed dark metallic phases in Asodhita and shodhita Naga (Lead metal). Shasthiputa Naga Bhasma from both traditional Puta (TPM) and electric muffle furnace Puta (EMFPM) methods exhibited a lead sulfide distribution, with no free lead present. The traditional Puta method yielded a more homogeneous lead sulfide distribution, suggesting it may be superior. Thus, metallography can standardize metal-based preparations (Dhatu Bhasma) in Rasashastra.

3.9 Yashada Bhasma

Reference: Rasatarangini, Tiranga- 19

राशीकृत्य ततो भस्म शरावेण पिधापयेत्।
अष्टद्वारवर्णं स्याद्यशदं तु तथा चिरम्।।
तथा प्रदीपयेदग्निं दिनमेकं भिषक्तमः।
स्वतः शीतं ततो ज्ञात्वा यशदं मृतमाहरेत्।।

(R.T, 19/114-115)

Ingredients Used

Drug Name	Part Used	Proportion
Jarita Yashada Churna	–	1 Part
Kumari Rasa	Lf.	Q.S.

Procedure:

Take all the ingredients as required. First, triturate Jarita Yashada with Kumari Svarasa for one day. Form thin, flat cakrikas and dry them under the sun. Place these chakrikas in a Sharava Samputa and apply Sandhi Lepa. Then, administer Gaja Puta. Repeat this process until the bhasma passes the bhasma pariksha.

Puta: Gajaputa.

Dose: 125 mg.

Anupana: Honey, Guduchi Svarasa, Trikatu Kashaya.

Therapeutic Uses: Grahani, Prasveda, Rajayakshma, Prameha, Shveta Pradara.

Pharmacodynamics

- Yashada Bhasma, prepared from Jarita Yashada Churana (processed zinc) and Kumari Rasa (Aloe vera juice), exhibits therapeutic properties.
- Traditionally indicated for conditions like gastrointestinal disorders, excessive sweating, tuberculosis, diabetes, and white discharge.
- Its pharmacological actions may include anti-diarrheal, anti-perspirant, anti-tubercular, anti-diabetic, and anti-leucorrhea effects.

Pharmacokinetics

- Administered orally at 125 mg dose, Yashada Bhasma is absorbed in the gastrointestinal tract.
- Distribution throughout the body allows its constituents to exert therapeutic effects.
- Metabolism and excretion pathways may vary depending on individual factors and formulation.
- Anupana (adjuvant) of honey, Guduchi Svarasa, and Trikatu Kashaya may enhance absorption and efficacy.

Research Updates

Sr.No.	Article Name	Author Name	Result
1.	Standardization of Prepared Yashada Bhasma	Khobragade Vaishali Mahadeorao, Associate Professor and Ph.D. Scholar, Department of Rasashastra and Bhaishajyakalpana , R.A. Podar Ayurvedic Medical College, Worli Mumbai, Maharashtra, India.	In this study, Marana of Yashada was performed using the fourth method from Rasatarangini. Pharmaceutical standardization was applied to the preparation steps of Yashada Bhasma. Three batches were compared for chemical and physical properties using quality control tests, physico-chemical tests, XRF, and particle size analysis. These efforts aimed to standardize Yashada Bhasma and scientifically validate Ayurvedic principles.
2.	Physico-chemical characterization of traditionally prepared Yashada bhasma	Avani Pareek, Department of Chemistry, Manipal University, Jaipur, Rajasthan, India	Yashada Bhasma is prepared through Shodhana, Jarana, and Marana, with plant extracts enhancing its medicinal qualities and reducing it to nano size. XRD shows a hexagonal ZnO phase in Yashada Bhasma, while the raw metal has crystallite Zinc. DLS and SEM reveal a significant reduction in particle size from 2063 nm (raw metal) to 339.8 nm and 324 nm, respectively. Zeta

Sr.No.	Article Name	Author Name	Result
			potential confirms the stability of Yashada Bhasma, and EDAX shows differences in Zinc and Oxygen concentrations. This study uses advanced analytical tools to standardize Yashada Bhasma and validate Ayurvedic principles scientifically.
3.	Pharmaceutical Standardization of Yashada Bhasma.	Saritha, PG Scholar Final year, Dept. of Rasa Shastra and Bhaishajya Kalpana, S.V. Ayurvedic College, TTD, Tirupati, Andhra Pradesh, India	Pharmaceutical standardization is crucial for ensuring the safety, efficacy, and consistent biological activity of any drug. In the preparation of Yashada Bhasma, procedures such as Shodhana, Bhavana, and Marana are essential. These processes remove toxins and enhance therapeutic efficacy, resulting in a safe and effective Bhasma.

3.10 Kashisha Bhasma

Reference: Rasamrita, Adhyaya- 3

काशीशं निम्बुनीरेण मर्दयित्वा तु चक्रिका:।
कार्या: शुष्का: सम्पुटस्था दशप्रस्थवनोपलै:।।
पुन: पुन: पुटो देयो यावद् भस्म निरम्लकम्।
तथा गैरिकवर्ण च काशीशस्य प्रजायते।। (Rasamrita, 3/159-160)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Shuddha Kashisha	–	1 Part
Nimbu Nira	Fr.	Q.S. for Mardana

Procedure:

Take all the ingredients as required. First, triturate Shuddha Kashisha with Nimbu Svarasa for one day. Form thin, flat chakrikas and dry them under the sun. Place these chakrikas in a Sharava Samputa and apply Sandhi Lepa. Then, administer Puta, using approximately 7.7 kg of vanopalas. Repeat this process until the bhasma passes the bhasma pariksha.

No. of Vanopala used for Bhasmikarana: 7.7 kgs (Approx) (A.F.I.)

Dose: 250 mg.

Anupana: Bakuchi Churna, Triphala Kvatha, Madhu.

Therapeutic Uses: Pandu, Pliha Roga, Hikka, Visarpa, Svitra, Kastartava, Vrana, Visa, Daurbalya, Netra Roga.

PHARMACODYNAMICS

- Kashisha Bhasma, derived from Shuddha Kashisha (purified green vitriol) and processed with Nimbu Nira (lemon juice), offers versatile therapeutic benefits.
- Traditionally indicated for anaemia, splenic disorders, hiccup, skin diseases, irregular menstruation, wound healing, poisoning, weakness, and eye disorders.
- Potential pharmacological actions include hematopoietic, anti-inflammatory, anti-oxidant, and wound healing effects.

PHARMACOKINETICS

- Administered orally at 250 mg dose, Kashisha Bhasma undergoes absorption in the gastrointestinal tract.
- Distribution throughout the body facilitates its therapeutic effects on various organs and systems.
- Metabolism and excretion pathways vary, influenced by individual factors and formulation composition.
- Anupana (adjuvant) of Bakuchi Churna, Triphala Kvatha.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Pharmaceutical and physicochemical study of Kashisha Bhasma	Shobhnath Yadav, Q.C. In-charge, Dhanvantari Unit, GSFDC Ltd., Vadodara, Gujarat, India	The study demonstrates that the prepared Kashisha Bhasma formulation exhibits crystallites agglomerating into single particles. It results in submicron-sized particle structures (1.22 µ) according to TEM analysis. Kashisha in the formulation is detected as iron oxide, reaching nanocrystalline sizes (31–56 nm) based on XRD analysis. In conclusion, Kashisha Bhasma is identified as a nanocrystalline substance with submicron-sized particles.
2.	Comparative Clinical Study of Kashish Bhasma and Phaltrikadi Kvatha on Pandu Roga	Chouhan Sachin, PhD. Scholar, Mandsaur Ayurved Medical College, Mandsaur, M.P., India	In the clinical study, 60 anaemia patients aged 18 to 60 were divided into two groups: Group A (n=30) treated with Kashisha Bhasma and Group B (n=30) treated with Kashisha Bhasma along with Phaltrikadi kwath. Both treatments significantly improved symptoms such as fatigue, weakness, palpitations, exertional dyspnea, anorexia, and pain in the back and lower limbs. Kashisha Bhasma notably affected Hb gm. %, RBC, MCV, PCV, serum iron, and TIBC. Additionally, Kashisha Bhasma with Phaltrikadi kvatha significantly influenced Hb gm. %, RBC, PCV, MCV, MCH, serum iron, percent transferrin saturation, and TIBC.

Sr.No.	Article Name	Author Name	Result
3.	Clinical study of Kashisha bhasma and Annabhedi chenduram with reference to Hb%	Dr. Ashwin Ashok Shete MD (Rasashastra and Bhaishajyakalpana), Assistant Professor, Dr. D Y Patil College of Ayurveda and Research Centre, Pimpri, Pune, Maharashtra, India	This study is unique in its comparison of an Ayurvedic Rasashastra drug with the prevailing treatment in Siddha medicine on a larger scale, involving 60 patients (30 each). It assessed the relative increase in blood Hb% levels through a single-blind study design, with measurements taken at intervals of 15, 30, and 45 days using Sahli's Hemoglobinometer. Statistical analysis was conducted, revealing promising and cost-effective results for a developing country like India.

3.11 Shuddha Shilajatu

Reference: AFI, Part I, Appendix-II (Shodhana); R.T.

विगताम्बुदे निवाते धरणीतल प्रदेशे।
प्रखरे निदाघकाले प्रणयेच्छिलाजशुद्धिम्।।
विमलानि भाजनानि त्वयसा विनिर्मितानि।
युगसंमितानि तीव्रे निदधीत सूर्यतापे।।
सुविचूर्णितं शिलाजं विनिधाय पात्रमध्ये।
द्विगुणं प्रतप्तनीरं त्रिफलाकषायमर्द्धम्।।
गिरिजे प्रदाय यामं निदधीत तीव्रतापे।
कामं विमर्द्य गिरिजं विदधीत वस्त्रपूतम्।।
विनिधाय पूर्वपात्रे निदधीत तीव्रतापे।
अथ तीव्रतापयोगाद्विमलं सरं प्रकाशम्।।
मृदुलं प्रगाढकृष्णं यदुपैति नीरपृष्ठे।
विदधीत सोष्णतोये खलु भाजनेऽपरस्मिन्।।
अथ वै द्वितीयपात्रात् खलु भाजने तृतीये।
अथ भाजनात्तृतीयात् निदधीत तुर्यपात्रे।।
सलिलं तु यावदच्छं न भवेत्तु तावदेवम्।
विदधीत वैद्यवर्यः सततं कृतावधानः।।
सलिलं भवेद्यदाच्छं मलमेत्यधः प्रदेशे।
सलिलोर्ध्वभागसंस्थं गिरिजं हरेद्विशुद्धम्।। (R.T., 22/69-77)

Ingredients Used

Drug Name	Part Used	Proportion
Shilajtu	Exd.	2 Parts
Hot Water	–	4 Parts
Triphala Kvatha	P.	1 Part

Procedure:

The powder of Shilajatu (stone) is vigorously mixed with hot water to disengage the soluble matter. It is then allowed to settle, and the supernatant suspension is decanted and concentrated into a thick paste or solid amorphous substance. The above-extracted Shilajatu, or Shilajatu as available in the market, is subjected to further Shodhana as follows:

Shilajatu is mixed with double the quantity of water and half the quantity of Triphala Kvatha, and then carefully boiled to dryness.

Dose: 12- 48 gms (Acharya Charaka)

Anupana: Godugdha, Takra, Mamsa Rasa, Jala, Gomutra.

Therapeutics: Jvara, Pandu, Prameha, Agnimandya, Gulma, Hridshula, Tvak Roga.

Pharmacology

Shuddha Shilajatu, processed with hot water and Triphala Kvatha, is renowned for its multifaceted therapeutic properties. Traditionally indicated for a wide array of health conditions, including weakness, urinary disorders, diabetes, and respiratory ailments, its pharmacological actions may include adaptogenic, rejuvenating, anti-inflammatory, and antioxidant effects.

Research Updates

Sr.No.	Article Name	Author Name	Result
1.	Comparative Pharmaceutico-analytical Study of Shilajatu Collected from Himachal Pradesh with that Samples Obtained from Standard Commercial Sources and their In-vitro Anti-oxidant Study: A Study Protocol	Sudarshan K. Thakur, Department of Rasa Shastra and Bhaishajya Kalpana, Faculty of Ayurveda, Doon Institute of Medical Sciences, Dehradun, Uttarakhand, India.	Broadly, the composition of Shilajatu is reported to possess inorganic to organic materials, like more than 85 minerals, Ca, Fe, K, Li, Mg, Al, C, Mn, Na, Ni, P, Si, S etc. elements and compounds like eighteen free amino acids, benzoic acid, m –hydroxybenzoic acid, sterols, tri-terpenes, ellagic acid, three bencoumarins and also Fulvic acid & Humic acid.
2.	Pharmaceutico-Analytical Study of Shodhita Shilajatu	K. A. Patil, Assistant Professor, Dept. of Rasashastra, BLDEA's AVS Ayurveda Mahavidyalaya, Bijapur, Karnataka, India.	In this study, a 10% loss was observed during pharmaceutical processing. Analytical results showed physical constants within normal limits. Phytochemical analysis detected tannins, steroids, triterpenoids, flavonoids, proteins, saponins, and carotenoids.

Sr.No.	Article Name	Author Name	Result
3.	A Comparative Clinical Study on The Effect of Ashmarikhandana Rasa and Gomutra Shilajatu In The Management of Mutrashmari	Dr. Chandra Bhushan Sinha, Asst.Professor, Department of Shalya Tantra, Ayurveda Mahavidhyalaya, Hubli, Karnataka	Both the formulations have shown highly significant result in reducing subjective parameters and objective parameters. In Group A Ashmari khandana Rasa was given to 15 patients. In that 75% (marked relif) observed. In Group B Gomutra Shilajatu was given to 15 patients. In that 75% (marked relif) observed. Conclusion: Both Group A (Ashmari khandana Rasa) and Group B (Gomutra Shilajatu) have shown highly significant outcomes.

3.12 Shuddha Gandhaka

Reference: AFI, Part I, Appendix-II (Shodhana)

गव्ये पयति गन्धं तु भृंगराजरसेऽथवा।
रसपर्पटिकाप्रोक्तविधानेन विशोधयेत्।। (Rasamrita, 2/3)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Gandhaka	–	1 Part
Go- Dugdha or Bhringaraja Svarasa	(Pl.)	Q.S.

Procedure:

Gandhaka is melted in an iron pan smeared with ghee and then poured into a pot containing godugdha or bhringaraja rasa. Once cooled, it is collected, washed, dried, and then kept for use.

For the purpose of Rasa Parpati preparation, 3 or 7 Bhavanas of Bhringaraja are given to powdered Gandhaka. The Gandhaka is then melted in a ghee-coated vessel and poured into Bhringaraja rasa.

Dose: 1- 8 Ratti.

Therapeutic Uses: Kushtha, Kandu, Visarpa, Dadru, Amanashaka, Rasayana.

PHARMACODYNAMICS

1. **Antimicrobial Activity**: Gandhaka possesses strong antimicrobial properties, which help in inhibiting the growth of bacteria, fungi, and other pathogens on the skin. This action is crucial in treating skin infections such as acne, eczema, and fungal infections.
2. **Kerolytic Effect**: Gandhaka helps in exfoliating the outer layer of the skin, removing dead skin cells and promoting the regeneration of new cells. This keratolytic property is beneficial in treating conditions like psoriasis and dandruff.
3. **Anti-inflammatory Properties**: Gandhaka reduces inflammation by inhibiting the production of pro-inflammatory cytokines. This helps in alleviating redness, swelling, and irritation associated with various skin conditions.
4. **Antipruritic Effect**: It provides relief from itching, a common symptom in many skin diseases. By reducing itching, Gandhaka helps prevent secondary infections caused by scratching.
5. **Detoxifying Properties**: Gandhaka aids in detoxifying the skin by promoting the elimination of toxins and impurities. This purifying action is beneficial for maintaining healthy skin and preventing skin disorders.
6. **Wound Healing**: Gandhaka promotes wound healing by enhancing collagen synthesis and tissue regeneration. This property is useful in treating ulcers, sores, and other skin lesions.

PHARMACOKINETICS

1. **Absorption**: When applied topically, Gandhaka is absorbed through the skin on GI track. Its absorption can be enhanced when used in combination with a suitable vehicle such as Go-Dugdha (cow's milk) or Bhringaraja Svarasa (Eclipta alba juice).
2. **Distribution**: After absorption, Gandhaka is distributed locally to the affected skin areas on systematic pathway where it exerts its therapeutic effects.
3. **Metabolism**: Gandhaka is metabolized locally in the skin. Its exact metabolic pathways are not well-documented, but it is known to interact with skin proteins and cellular components to exert its effects on in hepatic system.
4. **Excretion**: The metabolites of Gandhaka are excreted through the skin. Any systemic absorption is minimal and excreted via the kidneys on feces.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	A Critical study of Gandhaka Shodhana	Manisha Rathi, Professor & HOD, Dept. of Rasa Shastra & Bhaishajya Kalpana, Mansarovar Ayurvedic Medical College Hospital & Research Center, Bhopal, Madhya Pradesh, India	Powdered Gandhaka, when melted in ghee in a pot, Ghee absorbs toxic substances, facilitating the removal of fat-soluble impurities, while milk effectively eliminates colloidal soluble impurities. Through Vastragalana, the process of filtering through a cloth, stones and other physical impurities are retained in the filter cloth.
2.	Gandhaka Shodhana (Purification of Sulphur)	Kajree Pardeshi, Dept. of Rasashastra & Bhaishajya Kalpana, SDM College of Ayurveda & Hospital, Hassan-573201, Karnataka, India	Gandhaka purification was conducted using the Dalana (heating and pouring) method, a classical technique, and evaluated for organoleptic characteristics. In this study, gandhaka was heated until melted and then poured into milk three times, following the Ayurvedic Dalana method. The initial quantity of gandhaka taken was 500 g, resulting in an obtained quantity of 468 g. The procedure outlined in the text was adhered to, and organoleptic characteristics were assessed.
3.	Development of standard operating process (sop) of Gandhaka shodhana as per Ayurved prakash	Dr. Sathe Ninad, Professor, Department of Rasashastra & Bhaishajya Kalpana, Dr. G.D. Pol Foundation's Y.M.T. Ayurvedic Medical College, Navi Mumbai, MHA	The classical purification process from Ayurved Prakash effectively removes impurities from gandhaka (S). Although traditionally three cycles are recommended, 100% purity was achieved after the second cycle in this study. A total weight loss of 17% was observed after purification.
4.	Applied Aspect of Gandhaka Shodhana and It's Importance.	Dr. Monika Kashyap P.G. Scholar Dept. of Rasa Shastra & Bheshijya Kalpana at Rani Dullaiya Smt. Ayurved P.G. College and Hospital, Bhopal, M.P.	Gandhaka is vital for preparing Rasaushadha in Rasashastra, with shuddha gandhaka required for medicines. The dalana process using goghrita and godugdha is standard. Ayurved Prakash and Rasayana sara recommend equal and one-fourth quantities of goghrita, respectively. The shodhana process is crucial, comprising half of the preparation procedure. Changes in material quantities during shodhana can affect the entire process and alter the drug's structure.
5.	Effect of Different Shodhana Media on Gandhaka.	Dr. Ganti Basavaraj Y, Associate Professor, Dept. of Rasashastra and Bhaishajya Kalpana, SDM College of Ayurveda, Hassan, Karnataka	This study examines shuddha Gandhaka using organoleptic and preliminary chemical analysis. Purified Gandhaka should be odorless, fragile, thin-flaked, and metallic-sounding. Post-shodhana, it retains its yellow colour. The yield validates the method for Rasa-Rasayana karmas. Gandhaka's thermal properties are Mandagni at 113-120°C and Madhyamagni at 360-400°C.

3.13 Shuddha Gairika

Reference: AFI, Part I, Appendix-II (Shodhana)

गैरिकं तु गवां दुग्धैर्भावितं शुद्धिमृच्छति ॥ (R.R.S., 3/49)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Gairika	—	1 Part
Godugdha	—	Q.S. For Bhavana

Procedure of Shodhana: Take Gairika and powder it using a Khalva. Add godugdha and perform the Bhavana procedure three times.

Dose: 250 mg.

Therapeutic Uses: Raktapitta, Hikka, Vamana, Visha, Kandu, Shitapitta.

PHARMACOLOGY

Gairika, processed with cow's milk (Godugdha), is known for its therapeutic properties attributed to its mineral composition and the properties imparted by the milk. Traditionally indicated for conditions like bleeding disorders, skin ailments, and digestive issues, its pharmacological actions may include hemostatic, dermatological, and gastrointestinal benefits.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	An analytical study of Gairika by two different methods of shodhana	Manjiri Ranade, Department of Rasashastra and BK Institute Sri Sai Ayurvedic Medical College, Aligarh, Uttar Pradesh, India	Shodhana of Gairika was performed using two methods: Method a with Godugdha and Method B with Goghri-ta. Organoleptic and physicochemical char-acteristics of Gairika were studied before and after shodhana. ICP-AES analysis was conducted on three

Sr.No.	Article Name	Author Name	Result
			samples. Results indicated changes in pH, Mohs hardness, specific gravity, and transparency after shodhana with both Godugdha and Goghrita. ICP-AES data showed mineral content within permissible limits.

3.14 Shuddha Kankshi

Reference: AFI, Part I, Appendix-II (Shodhana)

काशीशं भृंगनीरेण त्रिवारं भावितं शुचि। (Rasamrita, 3/158)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Kashisha	–	1 Part
Bhringaraja Nira	Pl.	Q.S. For Bhavana

Procedure of Shodhana: Take Kankshi and powder it using a Khalva. Add Bhringraja rasa and perform the Bhavana procedure three times.

Dose: 1 Ratti.

Anupana: Sugar, Jala.

Therapeutic Uses: Kantha Roga, Keshya, Vishagana, Shvitra, Kushtha, Tridoshashamaka.

PHARMACOLOGY

Kashisha, prepared from iron sulphide and processed with Bhringaraja Nira (Eclipta alba juice), exhibits therapeutic effects attributed to its iron content and the properties imparted by the herb. Traditionally indicated for conditions like anaemia, liver disorders, and skin ailments, its pharmacological actions may include hematinic, hepatoprotective, and dermatological benefits.

3.15 Mukta Pishti

Reference: AFI, Part I, Pishti

Ayurveda Sara Sangraha, Sodhanamarana Prakarana.

INGREDIENTS USED

Drug Name	Part Used	Proportion
Shuddha Mukta	–	1 Part
Gulab Arka	Fl.	Q.S. For Mardana

Procedure:

1. Wash Mukta with warm water and dry it.
2. Triturate Pravala with Gulaba Arka for 7 days.
3. Collect and store the final product.

Dose: 65 to 125 mg.

Anupana: Honey, Butter Milk.

Important Therapeutic Uses: Raktaatisara, Rakta Pitta, Manodosha, Unmada, Hridroga.

PHARMACODYNAMICS

Mukta Pishti, made from purified pearl and rose water, is effective for conditions like bleeding disorders, mental disorders, and heart ailments. Its therapeutic effects may include hemostatic, calming, and cardiac tonic properties. Anupana ingredients like honey and butter milk could enhance its efficacy.

PHARMACOKINETICS

Administered orally at doses ranging from 65 to 125 mg, Mukta Pishti is absorbed in the gastrointestinal tract and distributed throughout the body. Metabolism and excretion pathways may vary, influenced by individual factors and formulation composition. Anupana choices such as honey and butter milk may influence absorption and effectiveness.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Comparative study of mukta bhasma and mukta pishti with reference to their particle size	Sawant R.S. Assistant Professor, Dept. of Rasashastra & Bhaishajya Kalpana, Smt. K.G.M.P. Ayurved Mahavidyalaya, Mumbai, M.H.A.	The study indicates that the particle size of Mukta Pishti is reduced more than that of Mukta Bhasma. This suggests that the properties of Mukta are preserved, as there is no direct contact with heat during the preparation of Mukta Pishti. This preservation makes it useful in diseases vitiated by Pitta.

3.16 Mukta Bhasma

Reference: Rasatarangini, 23/ 71

मुक्ताफलन्तु तरुणीपरिस्रुतजलान्वितम्।
पिष्टं त्रिवारं पुटितं मृतिमाप्नोत्यनुत्तमाम्।। (R.T., 23/71)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Shuddha Mukta	–	1 Part
Sutapatrika	–	Q.S. for Mardana

Procedure:

Take all the ingredients as required. First, triturate Shuddha Mukta with Shatapatrika for one day. Form thin, flat chakrikas and dry them under the sun. Place these chakrikas in a Sharava Samputa and apply Sandhi

Lepa. Then, administer Gaja Puta. Repeat this process for three times or until the bhasma passes the bhasma pariksha.

Puta: Gaja Puta- three times.

Dose: 125 mg.

Anupana: Honey, Butter, Milk.

Therapeutic Uses: Kasa, Shvasa, Kshaya, Jirna Jvara, Pittaja Jvara, Dantobhava Jvara, Hridaurbalya, Manovikara.

PHARMACODYNAMICS

Mukta Bhasma, comprising purified pearl and rose water, possesses diverse therapeutic effects, including cooling, anti-inflammatory, and rejuvenating properties. It is indicated for various respiratory, febrile, and mental disorders, along with cardiac weakness. These effects are attributed to its composition, which may modulate immune responses and promote tissue repair.

PHARMACOKINETICS

Administration of Mukta Bhasma orally results in absorption in the gastrointestinal tract, followed by distribution throughout the body. The specifics of its metabolism and excretion pathways are not extensively documented. Anupana, such as honey, butter, and milk, may influence its absorption, potentially enhancing its therapeutic efficacy.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Standardization and quality control parameters for *Mukta Bhasma*	Namrata Joshi Department of Rasashastra and B. K., Rishikul P. G. Government Ayurveda College, Haridwar, Uttarakhand, India	Three Mukta Bhasma (MB) samples underwent purification of Mukta (pearl) and repeated calcinations. Organoleptic and Ayurvedic tests were conducted. Mukta initially in aragonite form transformed into stable calcite through calcinations. SEM studies showed particle size reductions from 718.7–214.7 nm to 279.2–79.93 nm. EDAX analysis revealed increasing calcium content from raw (34.11%) to purified (37.5%) MB.
2.	Pharmaceutico-Analytical Study of Mukta Bhasma Prepared in Godugdha	Suman Lata, Research Scholar, Dept. of Rasashastra, B.M.J. Ayurvedic Medical College, Rajiv Gandhi University of Health Sciences, Karnataka, India	The study aimed to pharmaceutically analyze Mukta Bhasma prepared in Godugdha through physico-chemical tests and advanced instrumental techniques such as XRD and XRF. From 300g of raw Mukta, 208 g of dull white Mukta Bhasma was obtained, containing 43.86% w/w calcium by AAS and 45.07% Ca by XRF. Evaluation included loss on drying (0.24% w/w), total ash (99.84% w/w), acid insoluble ash (0.34% w/w), water-soluble ash (8.31% w/w), specific gravity (1.0185), and particle size (20nm to 100nm by TEM). XRD peaks confirmed the presence of calcium carbonate (Calcite). XRF detected elements in Mukta Bhasma, with Ca (45.07%), O (41.52%), and C (12.44%) being predominant. Other elements were present in smaller percentages or traces.

3.17 Pravala Pishti

Reference: AFI, Part I, Pishti

Ayurveda Sara Sangraha, Sodhanamarana Prakarana.

INGREDIENTS USED

Drug Name	Part Used	Proportion
Shuddha Pravala	–	1 Part
Gulaba Arka	Fl.	Q.S. For Mardana

Procedure:

1. Wash Pravala with warm water and dry it.
2. Triturate Pravala with Gulaba Arka for 7 days.
3. Collect and store the final product.

Dose: 250 mg.

Anupana: Honey, Butter, Ghee.

Important Therapeutic Indication: Kasa, Pittaroga, Manodaurbalya, Ojakshaya, Hridroga.

PHARMACODYNAMICS

Pravala Pishti, composed of purified coral and rose water, treats cough, Pitta disorders, mental weakness, immune deficiency, and heart ailments. Its properties include antitussive, cooling, and cardiac tonic effects, likely due to its mineral content and soothing rose water. Anupana ingredients like honey, butter, and ghee may enhance its efficacy.

PHARMACOKINETICS

Administered orally at 250 mg, Pravala Pishti is absorbed in the gastrointestinal tract and distributed throughout the body. Metabolism and excretion pathways may vary, influenced by individual factors and formulation

composition. Anupana choices such as honey, butter, and ghee may impact absorption and effectiveness.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Comparative Pharmaceutical Standardization and Oral Bioavailability Study on Praval Pishti and Praval Bhasma	Megha Satpute, Department of Rasashastra and Bhaishajya Kalpana, Mahatma Gandhi Ayurveda College Hospital and Research Centre, Salod (H) Wardha, (MHA), Datta Meghe Institute of Medical Sciences (Deemed to be University) Wardha, (MHA), India.	Two formulations will be prepared from Pravala (coral): Pravala Pishti by triturating with Gulab jala and Pravala Bhasma by traditional Puta method. They will undergo assessment based on Bhasma Pariksha from Ayurveda, Including organoleptic characters, physicochemical parameters, and Particle size distribution analysis, SEM-EDX, FTIR, XRD, and GCMS. A study in healthy volunteers will compare the relative oral bioavailability of Pravala Pishti and Pravala Bhasma with a standard calcium supplement.

3.18a Praval Bhasma

Reference: Rasa Tarangini- 23/ 135

सम्पुटस्थं ततः कृत्वा त्रिवारं पुटयेद्भिषक्।
एवं पुटत्रयैर्भस्म जायते शशिसुन्दम्।।135।।

INGREDIENTS USED

Drug Name	Part Used	Proportion
Suddha Praval	-	1 Part
Kumari Swarasa	-	Q.S. for Marana

PROCEDURE:

Take all the ingredients as required. First, triturate Shuddha Praval with Kumari Swarasa for one day. Form thin, flat cakrikas and dry them under the sun. Place these cakrikas in a Sharava Samputa and apply Sandhi Lepa. Then, administer Gaja Puta. Repeat this process three times or until the bhasma passes the bhasma pariksha.

Dose: 125- 250mg

Anupana: Honey, Ghrita.

Therapeutic Indication: Deepan, Pachana, Drishti Roga, Kaphavatahara, Rakht-Pitta Shamaka, Vishahara.

PHARMACODYNAMICS

1. **Calcium Supplementation**: Pravala Bhasma is an excellent source of bioavailable calcium, which helps maintain bone health, muscle function, nerve transmissions, and cardiovascular health.
2. **Digestive Stimulant (Deepana, Pachana)**: Used as digestive stimulants, it stimulates the secretion of digestive enzymes, thereby improving the digestion process. Agnikeshya- Agni deepan – facilitates the correct functioning of digestive fire and is beneficial in indigestion problems, hyperacidity, and acid reflux due to its antacid nature.
3. **Anti-inflammatory and Anti-hemorrhagic**: Used as anti-hemorrhagic because it helps reduce inflammation and bleeding.
4. **Respiratory Health**: Pravala Bhasma is useful against poison.

PHARMACOKINETICS

1. **Absorption**: Pravala Bhasma is micronized by an Ayurvedic process, which enhances its absorption in the gastrointestinal tract. The bioavailability of calcium from Pravala Bhasma is better than routine calcium supplements.
2. **Distribution**: After absorption, bioavailable calcium and other trace elements are distributed throughout the body, especially in bones and teeth, to support structural integrity and numerous physiological purposes.
3. **Metabolism**: Being a mineral, its therapeutic action takes place through the minerals in this Bhasma, acting directly on tissues.
4. **Excretion**: The unabsorbed portion of Pravala Bhasma is excreted through feces, with excess calcium being excreted through the kidneys.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Pharmaceutico-analytical study of Praval Bhasma (Coral calax) with two different herbs	Arati P Dubewar, Professor HOD & PhD Guide, Dr D Y PatilVidyapeeth deemed to be University. Dr. D.Y.Patil College of Ayurved & Research Center, Pimpri, Pune.	Different drugs are used in Bhasmikarana based on their properties. Shuddha Pravala is triturated with Aloe vera or Guduchi to form flat cakes, which are dried and subjected to fire. Aloe vera enhances the strength and shine of the cakes, and its anti-inflammatory, ulcer-healing, and immune-modulatory properties may aid stem cell growth. Guduchi, rich in immune-stimulating alkaloids and essential elements, is also used for its Rasayana effects.

Sr.No.	Article Name	Author Name	Result
2.	*Pravala Bhasma* formulations in *Bhaishajya Ratnavali*- Critical review	Dr. Bharat Rathi, Department of Rasashastra & Bhaishajya Kalpana, Mahatma Gandhi Ayurved College and Hospital and Research Centre, Datta Meghe Institute of Higher Education (Deemed to be University), Sawangi (M), Wardha, Maharashtra, India.	In the present review, a total of 51 formulations containing *Pravala Bhasma* have been reviewed, which are indicated in various disorders in the form of powder and tablet.
3.	Qualitative analysis of praval bhasma by namburi phased spot test	Dr. Suman Lata Assistant Professor in Department of Rasa-Shastra, Ch. Devi Lal College of Ayurveda and Hospital Jagadhri, Haryana, India	The Namburi Phased Spot Test (NPST) is used to assess the quality of Sindura and Bhasma. Praval was purified using sarjika-kshar by Dolayantra vidhi, then processed into Praval Bhasma with cow milk (Godugdha). NPST was performed on the Praval Bhasma, and results were consistent with NPST standards, confirming its quality. Turmeric, a natural pH indicator, showed the alkaline nature of Praval Bhasma by turning from yellow to dark red. The Bhasma's fine particle size enhances calcium absorption, with calcium present in the optimal Ca2+ form. NPST validated the fineness and quality of the prepared Bhasma.

3.18b Vajra Bhasma

Reference: Rasamrita, 8/8-9

हीरकं रससिन्दूरं शिलां गन्धं च तालकम्।।
कुलत्थक्वाथसम्पिष्टं त्रिदिनं कृतगोलकम्।
संशुष्कं तु शरावस्थं रुद्धं गजपुटैः पचेत्।
चतुर्दशपुटैरेवं हीरकं मृतिमाप्नुयात्।। (Rasamrita, 8/8-9)

Ingredients Used

Drug Name	Part Used	Proportion
Shuddha Hiraka	–	1 Part
Shuddha Parada	–	1 Part
Shuddha Manahshila	–	1 Part
Shuddha Gandhaka	–	1 Part
Shuddha Haritala	–	1 Part
Kulatha Kvatha	Sd.	1 Part

Procedure:

1. Take all the ingredients as required.
2. First, Shuddha Hiraka with Suddha Parada triturate properly.
3. Then add Shuddha Manahshila, Shuddha Haritala and Shuddha Gandhaka triturate well.
4. Adding Kulatha Kvatha as drava dravya and triturate until it become dry.
5. Place them in a Sharava Samputa and apply Sandhi Lepa.
6. Then, administer Gajaputa.
7. Repeat this process for 14 times or until the bhasma passes the bhasma pariksha.

Puta: 14 times.

Dose: 8 mg.

Anupana: Honey, Santaika.

Therapeutic Uses: Udara, Pandu, Medodosha, Prameha, Sotha, Rajayakshma, Netraroga, Valmika Arbuda.

Pharmacodynamics

Vajra Bhasma, composed of purified diamond and other minerals, addresses a spectrum of conditions including abdominal disorders, anaemia, obesity, diabetes, inflammation, tuberculosis, eye disorders, and tumors. Its mineral combination, supplemented by Kulatha Kvatha, potentially offers anti-inflammatory, antioxidant, anti-diabetic, anti-tumor, and immunomodulatory effects.

Pharmacokinetics

Administered orally at 8 mg, Vajra Bhasma is absorbed in the gastrointestinal tract and distributed throughout the body, where its constituents exert therapeutic actions. While specific metabolism and excretion pathways may vary, the suggested Anupana of honey and Santaika could enhance absorption and efficacy.

Research Updates

Sr.No.	Article Name	Author Name	Result
1.	A Comparative Analytical Study of Hiraka Bhasma	Upendra U. Zala, Associate Professor, Department of Rasa Shastra & Bhaishajya Kalpana, J. S. Ayurveda College, Nadiad (Gujarat)	Analytically, Hiraka Bhasma contains Fe_2O_3 as a major compound, giving it a Malina Rakta colour. The particle sizes of Hiraka Bhasma-I and II were found to be 113 µm and 69.4 µm VMD, respectively.

3.19 Kaparda Bhasma

Reference: Ayurveda Prakasha, Adhyaya-2

अङ्गाराग्नौ स्थिता ध्माता सम्यक् प्रोत्फुल्लिता यदा।
स्वाङ्गशीता मृता तां तु पिष्ट्वा सम्यक् प्रयोजयेत्।।

(Ayurveda Prakasha 2/300)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Shuddha Kapardika	–	1 Part

Procedure:

1. Place Shuddha Kapardika in a Sharava Samputa and apply Sandhi Lepa.
2. Then, administer Gajaputa.
3. Repeat this process until the bhasma passes the bhasma pariksha.

Dose: 250 mg

Anupana: Vasa Svarasa, Nimbu Svarasa, Trikatu Kshaya, Udumbara Rasa.

Therapeutic Uses: Agnimandhya, Parinama Shula, Grahani, Rajayakshma, Karna Srava, Netraroga, Sphota, Raktavikara, Shukraksaya.

Precaution: After Preparing Bhasma, It should be kept in water for 24 hours, to reduces Tikshnatva.

PHARMACODYNAMICS

Kaparda Bhasma, derived from purified cowrie shell, exhibits cooling and antacid properties, aiding in balancing the Agni (digestive fire) and treating conditions like indigestion, peptic ulcers, and gastrointestinal disorders. Its potential anti-inflammatory and immunomodulatory effects extend its utility to conditions such as tuberculosis, ear discharge, eye disorders, and blood disorders. Anupana ingredients like Vasa Svarasa, Nimbu Svarasa, Trikatu Kshaya, and Udumbara Rasa may enhance its therapeutic actions.

PHARMACOKINETICS

Administered orally at 250 mg, Kaparda Bhasma is absorbed in the gastrointestinal tract and distributed throughout the body. While specific metabolism and excretion pathways may vary, soaking the prepared Bhasma in water aims to reduce its sharpness. However, detailed pharmacokinetic data may be limited.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Pharmaceutical Study of Kapardika Bhasma	Kulshrestha, Mayank Krishna, Dept. of Rasa Shastra and Bhaisajya Kalpana, Rajiva Lochana Ayurveda Medical College and Hospital, Chandkhuri, Chhattisgarh.	The studies revealed that Kaaprdika bhasma (Angara dhamana) contains 43.02% calcium, whereas Kaaprdika bhasma (Gajaputa) contains 44.31% calcium. It can be concluded that in pharmaceutical processing, Kapardika bhasma prepared by the Gajaputa method is superior to Angara dhamana as it is easier and yields higher calcium content.
2.	Standardization of Kapardika Bhasma Prepared with the Classical Method of Rasachandamshu	Khobragade Vaishali Mahadeorao, Associate Professor, Ph.D. Scholar, Department of Rasashastra and Bhaishajyakalpana, R.A. Podar Ayurvedic Medical College, Worli Mumbai, Maharashtra, India.	This method of preparing Kapardika Bhasma is achievable and less time-consuming than others. The shodhana procedure renders Kapardika lustreless and changes its color from yellow to whitish. XRF analysis indicates a slight increase in calcium content after shodhana and Marana.
3.	Pharmaceutico-Analytical Study of Varatika Bhasma with Special Reference to its Types According to Rasatarangini	Dr. C.S. Maladkar Professor and HOD Shri J.G.C.H.S Ayurvedic Medical College Ghataprabha, Karnataka, India	Analytical methods indicated that all three samples of Varatika Bhasma displayed similar properties, suggesting insignificant differences among them. Therefore, all samples can be utilized for treatment purposes. Further research is required to assess the absorption extent and intrinsic effects at the tissue/cellular level of these bhasmas on various experimental models.
4.	Chemical Standardisation Studies on Varatika Bhasma	Devanathan. R., Centre for Advanced Research in Indian System of Medicine (CARISM), SHASTRA University, Thanjavur-613 401, Tamilnadu.	This study finds that: 1. Particle size decreases, likely due to purification processes, supported by SEM data. 2. XRD patterns confirm the formation of more crystalline compounds, attributed to purification and Incineration processes.

3.20 Shankha Bhasma

Reference: Rasatarangini, 12/17-19

शुद्धशङ्खस्य खण्डानि शरावे स्थापयेत्सुधीः।
शरावेण पिधायाथ यत्नात्सन्धिं प्रलेपयेत्।।
आतपे त्वथ संशोष्य पुटेद् गजपुटे भिषक्।
स्वतः शीतं समुद्धृत्य खल्वे सञ्चूर्णयेद् भिषक्।।
चूर्णितञ्चाथ विज्ञाय सम्पुटस्थं ततः पुटेत्।
एवं पुटद्वयेनैव शङ्खको मृतिमाप्नुयात्।।

(Rasatarangini, 12/17-19)

Ingredients Used

Drug Name	Part Used	Proportion
Shuddha Shankha	–	1 Part
Kumari Svarasa	Lf.	Q.S. for Mardana

Procedure:

Take all the ingredients as required. First, triturate Shuddha Shankha with Kumari Svarasa for one day. Form thin, flat chakrikas and dry them under the sun. Place these chakrikas in a Sharava Samputa and apply Sandhi Lepa. Then, administer Gaja Puta. Repeat this process until the bhasma passes the bhasma pariksha.

Dose: 250- 300 mg.

Anupana: Kumari Svarasa, Triphala Kvatha.

Therapeutic Uses: Ajirna, Agnimantha, Grahani, Amalapitta, Parinama Shula, Yakritpliha vriddha, Visha.

Pharmacodynamics

Shankha Bhasma, derived from purified conch shell, exhibits antacid and digestive properties, making it effective for indigestion, peptic ulcers, acidity, and abdominal colic. The addition of Kumari Svarasa may enhance its effects, possibly through anti-inflammatory and gastroprotective mechanisms.

Pharmacokinetics

Administered orally at 250-300 mg, Shankha Bhasma is absorbed and distributed throughout the body. However, detailed pharmacokinetic data is limited. Metabolism and excretion pathways may vary, influenced by individual factors and formulation composition. The suggested Anupana of Kumari Svarasa and Triphala Kvatha could impact absorption and therapeutic effectiveness.

Research Updates

Sr.No.	Article Name	Author Name	Result
1.	Pharmaceutical Study of Shankha Bhasma by two Different Methods	Dr. Arpita Sharma, P.G. Department of Rasa Shastra and Bhaishajya Kalpana, R.G.G.P.G. Ayurvedic College, Paprola, H.P., India	This study prepared six batches of Shankha Bhasma, with Group A using Gajaputa Marana and Group B employing open Maran followed by two Laghuputa. Both groups required a minimum of three Puta for transformation. The color of Group A Bhasma was white, while Group B was off-white. EDAX analysis detected Ca, C, O, and Si in both Bhasmas, indicating similar composition despite differing preparation methods.
2.	A Critical Review on Therapeutic Uses of Shankha Bhasma	Dr. Laxmi Narayan Gupta Department of Rasa Shastra & Bhaishajya Kalpana, Faculty of Ayurveda, IMS, BHU, Varanasi, U.P., India	The present study compiles and assesses relevant literature and contemporary research on Shankha Bhasma (SB) preparation, focusing on pharmaceutical and analytical parameters. It integrates ancient Indian texts with modern research databases to offer insight into SB's characterization and therapeutic potential, aiming to enhance human well-being.
3.	Physico-Chemical Analysis of Shankha Bhasma W.S.R. to Rasachandanshu (Dagdhikrita)	Dr. Mrunmayee Mahesh Patil, Final Year PG Scholar, Department of Rasashastra Evum Bhaishajya Kalpana, YMT Ayurvedic Medical College and Hospital, Kharghar, Navi Mumbai, MHA, India	In conclusion, Shankha Bhasma can be prepared following the method outlined in Rasachandamshu (Dagdhikarana), with observed Bhasma Siddhi lakshanas. This method proves to be simpler, more cost-effective, and feasible compared to other methods described in various texts. Shankha Bhasma prepared through this method is suitable for external application.

3.21 Godanti Bhasma

Reference: Rasataranagini, 11/ 240

शरावसम्पुटान्तःस्थं गोदन्तं सुविशोधितम्।
म्रियते पुटितं भस्म जायते शशिसुन्दरम्।। (R.T., 11/240)

Ingredients Used

Drug Name	Part Used	Proportion
Shuddha Godanti	–	1 Part
Kumari Svarasa	Lf.	Q.S. for Marana

Procedure:

1. Take all the ingredients as required.
2. First, triturate Shuddha Godanti with Kumari Svarasa for one day. Form thin, flat chakrikas and dry them under the sun.
3. Place these chakrikas in a Sharava Samputa and apply Sandhi Lepa.
4. Then, administer Gajaputa.
5. Repeat this process until the bhasma passes the bhasma pariksha.

Puta: Gajaputa.

Dose: 500 mg.

Anupana: Honey, Tulasi Svarasa, Ghee, Sugar.

Therapeutic Uses: Agnimandya, Sirashula, Pitta Jvara, Jirna Jvara, Kasa, Shvasa.

Pharmacodynamics

Godanti Bhasma, derived from purified gypsum, possesses cooling and anti-inflammatory properties, beneficial for conditions related to Pitta dosha imbalance such as headaches, fevers, cough, and asthma. The addition of Kumari Svarasa may enhance its effects, potentially through antioxidant and anti-inflammatory mechanisms.

Pharmacokinetics

Administered orally at 500 mg, Godanti Bhasma is expected to be absorbed and distributed throughout the body. However, detailed pharmacokinetic data is limited. Metabolism and excretion pathways may vary, influenced by individual factors and formulation composition. The suggested Anupana, including honey, Tulsi juice, ghee, or sugar, could impact absorption and therapeutic outcomes.

Research Updates

Sr.No.	Article Name	Author Name	Result
1.	Updated Overview on Godanti Bhasma (An Ayurvedic Formulation of Gypsum)	Sharma Arun, 1P G Scholar, P.G. Department of Rasa Shastra & Bhaishajya kalpana, Uttarakhand Ayurveda University, Rishikul Campus, Haridwar, Uttarakhanda, India	In modern Rasashastra, Godanti is used for Dehavada, not Dhattuvada. It undergoes Shodhana with Nimbu and Dronapushpi Svarasa, and Marana with Neem or Grahitakumari Svarasa. Processing incurs only a 25% weight loss and can be done traditionally or with an electric furnace. The resulting mild alkaline Bhasma aids rapid absorption without antibiotic properties, effective for ulcer healing and as an antipyretic agent.
2.	Evaluation of the efficacy of Godanti Bhasma in Shweta Pradara with special reference of Leucorrhoea—A Clinical Study.	Dr. Rudraxi A Malawad, Professor, Dept. of Rasashastra, Shri Veer Pulikeshi Rural Ayurvedic Medical College, Badami, Karnataka, India	In a study with 60 Shvetapradara patients, Group I received Godanti Bhasma with lukewarm water, Group II received only lukewarm water, and Group III received Azostat kit for 30 days. Group I showed 90-100% symptom relief, while Group III showed 50% relief with side effects. Pap smear reports indicated Group I and III patients had negative infections post-treatment, unlike Group II. Godanti Bhasma provided significant symptom relief and comparable antimicrobial activity to the Azostat kit.
3.	Preparation of Godanti Bhasma (Gypsum) by Muffle Furnace Using Traditional Method W.S.R. Rastarangini and its Comparative Physico Chemical Analysis	Dr. Mahantesh B. Rudrapuri Department of Post Graduate Studies in Rasashastra and Bhaishajya Kalpana, Shri Shivayogeeshwar Rural Ayurvedic Medical College and Hospital, Inchal, Belgavi, Karnataka, India	After the Shodhana procedure of Godanti in Nimbu Svarasa, it becomes white and brittle, with negligible loss. The pH shifts slightly acidic post-Shodhana. Traditional method preparation requires more time and labor compared to the furnace method. The pH of Bhasma is 6.58 for the furnace method and 8.90 for the traditional method, indicating a marked reduction in acidity for the latter. X-ray diffraction shows different phases for each method, while XRF reveals similar elemental contents. Further study is needed to determine their therapeutic effects, although both methods yield similar analytical results.

3.22 Shuddha Tankana

Reference: AFI, Part- 01, Appendix-II (Shodhana)

अतस्तं शोधयेदेव वह्नावुत्फुल्लितः शुचिः।

(Ayu.Pra., 2/244)

Ingredients Used

Drug Name	Part Used	Proportion
Tankana	–	1 Part

Procedure of Shodhana: Take Ashuddha Tankana and place small pieces of it in a vessel over fire. Collect it when dehydrated.

Dose: 1- 2 Ratti.

Anupana: Honey, Ghrita.

Theraputic Uses: Kaphadravaka, Ashmari, Kasa, Shvasa, Adymana, Varna nashaka.

PHARMACODYNAMICS

Shuddha Tankana, purified borax, is believed to exert mucolytic and expectorant effects. These properties help in loosening and expelling mucus from the respiratory tract, making it beneficial in conditions like cough and asthma.

PHARMACOKINETICS

Detailed pharmacokinetic data for Shuddha Tankana may not be extensively documented in traditional Ayurvedic literature. However, upon administration, absorption of borax is expected, followed by distribution throughout the body. Metabolism and excretion pathways may vary depending on the formulation and route of administration.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Physico-Chemical Standardization of Tankana (Borax): An Ayurvedic Mineral Drug	Srinivasulu B., P.G.Scholar, P.G. Dept. of Rasa-Shastra, Dr. N.R.S. Govt. Ayurvedic College, Vijayawada, AP., India	The study aimed to generate a fingerprint for raw and purified Tankana using techniques like X-ray Diffraction (XRD), SEM, EDAX, and chemical analysis to determine structural and chemical compositions. XRD revealed that raw Tankana contains $Na_2B_4O_7 10H_2O$ and $Na_2B_4O_7 5H_2O$, while purified Tankana contains $Na_2B_4O_7 5H_2O$. SEM studies showed uniform agglomerates of 10 microns in purified Tankana compared to raw Tankana's 3-micron grains. Quantitative chemical analysis indicated higher Boran content (13.48%) in purified Tankana compared to raw Tankana (10.08%). This study highlights physicochemical changes during purification and its significance for further research.

MULTIPLE CHOICE QUESTIONS

1. **What is the primary ingredient used in the preparation of Abhraka Bhasma according to Rasatarangini?**
   a. Dhanyabhraka
   b. Arka
   c. Nyagrodhamula Kvatha
   d. Rambha Rasa
2. **What is the recommended dosage range for Abhraka Bhasma?**
   a. 50 mg to 100 mg
   b. 125 mg to 375 mg
   c. 500 mg to 750 mg
   d. 1 g to 2g
3. **Which of the following therapeutic uses is NOT mentioned for Abhraka Bhasma?**
   a. Agnimandya
   b. Prameha
   c. Raktapitta
   d. Amavata
4. **What is the recommended Anupana (adjuvant) for taking Abhraka Bhasma?**
   a. Milk
   b. Water
   c. Honey
   d. Lemon juice
5. **What pharmacological action does Abhraka Bhasma exhibit?**
   a. Antibacterial
   b. Antifungal
   c. Hematogenic
   d. Antipyretic
6. **Which classical text provides the reference for the preparation of Svarna Makshika Bhasma?**
   a. Rasatarangini
   b. Rasendra Sara Sangraha
   c. Ayurveda Prakasha
   d. Charaka Samhita
7. **What is the primary ingredient used in the preparation of Svarna Makshika Bhasma according to Rasendra Sara Sangraha?**
   a. Shuddha Suvarna Makshika
   b. Shuddha Gandhaka
   c. Eranda Taila
   d. Nimbu Svarasa
8. **How many Putas are recommended for Svarna Makshika Bhasma preparation according to Rasa Tarangini?**
   a. 5
   b. 10
   c. 15
   d. 20
9. **Which therapeutic use is NOT mentioned for Svarna Makshika Bhasma?**
   a. Pandu
   b. Arsha
   c. Kasa
   d. Grahani
10. **What is the recommended dosage range for Svarna Makshika Bhasma?**
    a. 50 mg-100 mg
    b. 125 mg-250 mg
    c. 500 mg-750 mg
    d. 1 g-2 g
11. **Which classical text provides the reference for the preparation of Rajata Bhasma?**
    a. Charaka Samhita
    b. Rasendra Sara Sangraha
    c. Rasatarangini
    d. Ayurveda Prakasha

12. What are the primary ingredients used in the preparation of Rajata Bhasma according to Rasatarangini?
    a. Shuddha Rajata, Shuddha Parada, Shuddha Gandhaka, Shuddha Hartala.
    b. Shuddha Rajata, Shuddha Hingula, Nimbu Svarasa
    c. Shuddha Rajata, Shuddha Suvarna Maksika, Nimbu Svarasa.
    d. Shuddha Rajata, Shuddha Gandhaka, Nimbu Svarasa.
13. How many Putas are recommended for Rajata Bhasma preparation according to Rasatarangini?
    a. 10 c. 20
    b. 14 d. 24
14. Which therapeutic use is NOT mentioned for Rajata Bhasma?
    a. Prameha c. Madatyaya
    b. Pitta Roga d. Vata Roga
15. What is the recommended dosage for Rajata Bhasma?
    a. 50 mg c. 125 mg
    b. 100 mg d. 250 mg
16. Which method of preparation for Lauha Bhasma involves heating with Triphala Kvatha under sunlight?
    a. Bhanu Paka c. Putapaka
    b. Sthali Paka d. None of the above
17. How many times is the process of evaporating the fluid repeated in the Bhanu Paka method?
    a. 3 times c. 7 times
    b. 5 times d. 9 times
18. What is the proportion of Triphala Kvatha to be added in the Sthali Paka method?
    a. 1 part c. 3 parts
    b. 2 parts d. 4 parts
19. How many Putas are recommended in the Putapaka method for Lauha Bhasma preparation?
    a. 7 c. 14
    b. 10 d. 21
20. Which therapeutic use is NOT mentioned for Lauha Bhasma?
    a. Amavata c. Jvara
    b. Shula d. Svasa
21. How is Shuddha Tamra Patra prepared initially in the preparation of Tamra Bhasma?
    a. Grinding c. Svedana (Sudation)
    b. Boiling d. Roasting
22. What is the function of Nimbu Rasa in the preparation of Tamra Bhasma?
    a. Grinding agent c. Sudation
    b. Anti-inflammatory d. None of the above
23. What is the proportion of Shuddha Parada in the preparation of Tamra Bhasma?
    a. 1/4th Part c. 1/2 Part
    b. 1 Part d. 1/3rd Part
24. What is the role of Ghrita in the preparation of Tamra Bhasma?
    a. Grinding agent c. Sudation
    b. Heating d. None of the above
25. Which therapeutic use is NOT mentioned for Tamra Bhasma?
    a. Kustha c. Amavata
    b. Gulma d. Daha
26. How many times is Shuddha Vanga Jarita subjected to heating and grinding in the preparation of Vanga Bhasma?
    a. Once c. Three times
    b. Twice d. Four times
27. Which ingredient is NOT used in the preparation of Vanga Bhasma according to the Ayurveda Prakasha reference?
    a. Shuddha Vanga Jarita c. Nimbu Nira
    b. Shuddha Haritala d. Kumari Svarasa
28. What is the dosage range for Vanga Bhasma?
    a. 62.5 to 125 mg c. 250 to 500 mg
    b. 125 to 250 mg d. 500 to 1000 mg
29. Which therapeutic use is NOT mentioned for Vanga Bhasma?
    a. Prameha c. Mukhadushika
    b. Garbhasayacyuti d. Raktapradara
30. Which pharmacological action is NOT attributed to Vanga Bhasma?
    a. Anti-inflammatory c. Hematinic
    b. Anti-arthritic d. Antipyretic
31. What is the primary ingredient used in the preparation of Naga Bhasma?
    a. Shuddha Haritala c. Kumari Svarasa
    b. Jarita Naga d. Gandhaka
32. How many times is Manahshila added in the preparation of Naga Bhasma from the second Puta onwards?
    a. 1/2 part c. 1/4 part
    b. 1/3 part d. 1/5 part
33. What is the therapeutic use of Naga Bhasma?
    a. Kasa c. Atisara
    b. Shvasa d. Amlapitta
34. What is the recommended dosage range for Naga Bhasma?
    a. 31.25 to 62.5 mg c. 125 to 250 mg
    b. 62.5 to 125 mg d. 250 to 500 mg

35. Which anupana is recommended for enhancing the absorption and therapeutic efficacy of Naga Bhasma?
a. Guduchi Svarasa
b. Haridra Svarasa
c. Brahmi Svarasa
d. Triphala Kvatha

36. What is the primary ingredient used in the preparation of Yashada Bhasma?
a. Jarita Yashada Churana
b. Shuddha Haritala
c. Gandhaka
d. Kumari Rasa

37. How is Yashada Bhasma administered?
a. Intravenously
b. Orally
c. Topically
d. Sublingually

38. What is the recommended dosage of Yashada Bhasma?
a. 31.25 mg
b. 62.5 mg
c. 125 mg
d. 250 mg

39. Which of the following therapeutic uses is NOT associated with Yashada Bhasma?
a. Grahani
b. Prasveda
c. Kasa
d. Rajayakshma

40. Which anupana is recommended for Yashada Bhasma?
a. Guduchi Svarasa
b. Haridra Svarasa
c. Brahmi Svarasa
d. Trikatu Kashaya

41. What is the primary ingredient used in the preparation of Kasisa Bhasma?
a. Shuddha Kasisa
b. Gandhaka
c. Shuddha Haritala
d. Kumari Rasa

42. How is Kasisa Bhasma administered?
a. Intravenously
b. Orally
c. Topically
d. Sublingually

43. What is the recommended dosage of Kasisa Bhasma?
a. 31.25 mg
b. 62.5 mg
c. 125 mg
d. 250 mg

44. Which of the following therapeutic uses is associated with Kasisa Bhasma?
a. Kasa
b. Vrana
c. Rajayakshma
d. Arsha
e. b

45. Which anupana is recommended for Kasisa Bhasma?
a. Guduchi Svarasa
b. Haridra Svarasa
c. Bakuchi Churna
d. Brahmi Svarasa

46. What is the primary ingredient used in the preparation of Shuddha Shilajatu?
a. Triphala Kvatha
b. Hot Water
c. Shilajatu (Exd.)
d. Shilajatu (Powder)

47. What is the role of hot water in the Shodhana process of Shuddha Shilajatu?
a. To increase solubility
b. To decrease viscosity
c. To enhance color
d. To reduce pH

48. How many parts of hot water are used compared to Shilajatu in the Shodhana process?
a. 1 Part
b. 2 Parts
c. 3 Parts
d. 4 Parts

49. What therapeutic properties are associated with Shuddha Shilajatu?
a. Sedative and hypnotic
b. Anti-inflammatory and antioxidant
c. Antipyretic and analgesic
d. Diuretic and laxative

50. Which traditional indications are commonly treated with Shuddha Shilajatu?
a. Anxiety and depression
b. Cardiovascular diseases
c. Respiratory ailments and urinary disorders
d. Allergic reactions and skin disorders

51. What is the primary ingredient used in Shuddha Gandhaka preparation?
a. Godugdha
b. Bhringaraja Svarasa
c. Gandhaka
d. Iron pan

52. How is Gandhaka melted during the purification process?
a. In a brass vessel
b. In an iron pan with ghee
c. In a clay pot
d. In a steel container

53. What is added to Gandhaka during Rasa Parpati preparation for Bhavanas?
a. Godugdha
b. Bhringaraja Svarasa
c. Triphala Kvatha
d. Honey

54. How many Bhavanas are given to powdered Gandhaka for Rasa Parpati preparation?
a. 1 or 2
b. 3 or 7
c. 5 or 6
d. 8 or 9

Ans: b

55. What is the final step after Gandhaka is melted and poured into Bhringaraja rasa during Rasa Parpati preparation?
a. Cooling and washing
b. Drying and storing
c. Crushing and grinding
d. Packaging and labeling

56. What is the primary ingredient used in Shuddha Gairika preparation?
a. Godugdha
b. Gairika
c. Triphala Kvatha
d. Ghee

57. How many times is the Bhavana procedure performed during Shodhana of Gairika?
a. Once
b. Twice
c. Three times
d. Four times

58. What is used to powder Gairika during the Shodhana process?
a. Water
b. Ghee
c. Godugdha
d. Khalva

59. What is the purpose of performing the Bhavana procedure during Gairika Shodhana?
a. To add colour
b. To remove impurities
c. To enhance fragrance
d. To improve texture

60. What are the therapeutic properties traditionally associated with Shuddha Gairika?
a. Respiratory benefits
b. Hemostatic, dermatological, and gastrointestinal benefits
c. Cardiac benefits
d. Neurological benefits

61. What is the primary ingredient used in Shuddha Kankshi preparation?
a. Bhringaraja Nira
b. Kashisha
c. Triphala Kvatha
d. Ghee

62. How many times is the Bhavana procedure performed during Shodhana of Kankshi?
a. Once
b. Twice
c. Three times
d. Four times

63. What is used to powder Kankshi during the Shodhana process?
a. Water
b. Ghee
c. Bhringaraja Nira
d. Khalva

64. What is the purpose of performing the Bhavana procedure during Kankshi Shodhana?
a. To add color
b. To remove impurities
c. To enhance fragrance
d. To improve texture

65. What are the therapeutic properties traditionally associated with Shuddha Kankshi?
a. Cardiovascular benefits
b. Hematinic, hepatoprotective, and dermatological benefits
c. Respiratory benefits
d. Neurological benefits

66. What is the primary ingredient of Mukta Pishti?
a. Shuddha Mukta
b. Gulab Arka
c. Guggulu
d. Saffron

67. What is the traditional therapeutic use of Mukta Pishti for bleeding disorders called?
a. Rasa Rakta
b. Raktaatisara
c. Rakta Pitta
d. Rakta Shodhana

68. Which Anupana is recommended along with Mukta Pishti to enhance its efficacy?
a. Milk
b. Water
c. Honey
d. Tea

69. What are the therapeutic effects of Mukta Pishti?
a. Antipyretic and analgesic
b. Hemostatic, calming, and cardiac tonic
c. Antioxidant and anti-inflammatory
d. Antimicrobial and antifungal

70. Where is Mukta Pishti absorbed in the body after oral administration?
a. Respiratory tract
b. Urinary tract
c. Gastrointestinal tract
d. Circulatory system

71. What is the primary ingredient of Pravala Pishti?
a. Rose Water
b. Shuddha Pravala
c. Gulaba Arka
d. Ghee

72. What is the recommended dose of Pravala Pishti?
a. 100 mg
b. 500 mg
c. 250 mg
d. 1000 mg

73. Which of the following therapeutic indications is NOT associated with Pravala Pishti?
a. Mental weakness
b. Skin disorders
c. Heart ailments
d. Immune deficiency

74. What are the properties of Pravala Pishti?
a. Antipyretic and analgesic
b. Antiseptic and diuretic
c. Cooling and cardiac tonic
d. Laxative and sedative

75. How is Pravala Pishti absorbed in the body after oral administration?
a. Through the skin
b. Through the respiratory system
c. Through the gastrointestinal tract
d. Through the urinary system

76. Which mineral is the primary component of Vajra Bhasma?
a. Gold
b. Diamond
c. Silver
d. Copper

77. How many times is Vajra Bhasma subjected to Puta?
a. 10 times
b. 12 times
c. 14 times
d. 16 times

78. What is the recommended dose of Vajra Bhasma?
a. 5 mg
b. 8 mg
c. 10 mg
d. 15 mg

79. Which condition is NOT among the therapeutic uses of Vajra Bhasma?
a. Anaemia
b. Obesity
c. Arthritis
d. Diabetes

80. What is the suggested Anupana for Vajra Bhasma?
a. Water
b. Milk
c. Honey and Santaika
d. Ghee

81. What is the primary ingredient of Kaparda Bhasma?
a. Shuddha Gandhaka
b. Shuddha Kapardika
c. Shuddha Haritala
d. Shuddha Vajra

82. What is the recommended dose of Kaparda Bhasma?
a. 100 mg
b. 250 mg
c. 500 mg
d. 1000 mg

83. Which condition is NOT among the therapeutic uses of Kaparda Bhasma?
a. Tuberculosis
b. Diabetes
c. Ear discharge
d. Indigestion

84. What precaution should be taken after preparing Kaparda Bhasma?
a. Keep it exposed to sunlight for 24 hours
b. Store it in an airtight container
c. Keep it immersed in water for 24 hours
d. Consume it immediately

85. Which Anupana is NOT recommended for Kaparda Bhasma?
a. Vasa Svarasa
b. Nimbu Svarasa
c. Milk
d. Udumbara Rasa

86. What is the primary ingredient of Shankha Bhasma?
a. Shuddha Haritala
b. Shuddha Sankha
c. Shuddha Manashila
d. Shuddha Vajra

87. Which condition is NOT among the therapeutic uses of Shankha Bhasma?
a. Indigestion
b. Acidity
c. Rheumatoid arthritis
d. Peptic ulcers

88. What is the recommended dose range of Shankha Bhasma?
a. 100-150 mg
b. 200-250 mg
c. 250-300 mg
d. 400-500 mg

89. Which Anupana is NOT recommended for Shankha Bhasma?
a. Nimbu Svarasa
b. Triphala Kvatha
c. Milk
d. Honey

90. What is the additional ingredient used in Shankha Bhasma for preparation?
a. Guduchi Svarasa
b. Kumari Svarasa
c. Ashvagandha Svarasa
d. Brahmi Svarasa

91. What is the primary ingredient of Shuddha Tankana?
a. Gold
b. Copper
c. Borax
d. Iron

92. What effect does Shuddha Tankana primarily exert?
a. Antipyretic
b. Mucolytic and expectorant
c. Analgesic
d. Antihistaminic

93. In which conditions is Shuddha Tankana beneficial?
a. Skin infections
b. Digestive disorders
c. Cough and asthma
d. Hypertension

94. How is Shuddha Tankana prepared through Shodhana?
a. Boiling in water
b. Roasting over fire
c. Sun-drying
d. Grinding into powder

95. What is the expected pharmacokinetic behaviour of Shuddha Tankana?
a. Rapid metabolism
b. Slow absorption
c. Limited distribution
d. Extensive excretion

ANSWERS KEYS

1.	a	2.	b	3.	d	4.	c	5.	c
6.	b	7.	a	8.	b	9.	c	10.	b
11.	c	12.	a	13.	b	14.	d	15.	c
16.	a	17.	c	18.	b	19.	c	20.	a
21.	c	22.	c	23.	a	24.	b	25.	d
26.	b	27.	d	28.	b	29.	c	30.	b
31.	b	32.	c	33.	c	34.	b	35.	b
36.	a	37.	b	38.	c	39.	c	40.	d
41.	a	42.	b	43.	d	44.	b	45.	c
46.	c	47.	a	48.	d	49.	b	50.	c
51.	c	52.	b	53.	b	54.	b	55.	a
56.	b	57.	c	58.	d	59.	b	60.	b
61.	b	62.	c	63.	d	64.	b	65.	b
66.	a	67.	b	68.	c	69.	b	70.	c
71.	b	72.	c	73.	b	74.	c	75.	c
76.	b	77.	c	78.	b	79.	c	80.	c
81.	b	82.	b	83.	b	84.	c	85.	c
86.	b	87.	c	88.	c	89.	c	90.	b
91.	c	92.	b	93.	c	94.	b	95.	b

Short Answer Questions (SAQ)

- Short note on Pravala Pishti.
- Ingridents of Gandhaka Shodhana.
- Probable Mode of Action of Rajata Bhasma.
- Vanga Bhasma.

Long Answer Questions (SAQ)

- Describe Marana and write Svarna Mankshika Bhasma.
- Describle impotance of Bhasma Pariksha and write Shatputi Abharka Bhasma.
- Write the ingridents, Matra, probable mode of action of Lauha Bhasma and its research updates.

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CHAPTER 4

AUSHADHI KALPA - I (COMPOUND FORMULATIONS)

4.1 Kharaliya Rasayana

Kharaliya Rasayana is one of the most commonly utilized Parad Murchchhita Aushadha Vargikarana formulations in Ayurveda, recommended extensively across various disease conditions. The formulations that are prepared in a Kharala (mortar) by triturating until they attain the chief desired characteristics are known as Kharaliya Rasayana. It is a common dosage form in Ayurvedic medicine, containing metals and minerals, and is widely used in clinical practice. The principles of Bhavana and Mardana Samskara form the backbone of Kharaliya Rasayana preparation, ensuring both its therapeutic efficacy and safety Bhavana, a Samskara process, alters the original properties of raw drugs, inducing new ones in the main drugs Mardana and Bhavana Samskara play a pivotal role in ensuring the intimate contact of material particles with the liquid media, facilitating the impregnation of media properties into the material, and transforming coarse powder into a finer state to aid further processing. This process results in unique and suitable physico-chemical changes that enhance the efficacy of the material. The Mardana and Bhavana processes thus contribute significantly to the production of quality medicines, particularly Kharaliya Rasayana. Kharaliya Rasayana, prepared in classical ways, is both safe and effective for clinical practice in therapeutic doses.

Unique Features

1. Prolonged Self Life
2. Increase Therapeutic Efficacy
3. Decrease Dosage
4. Decrease Duration of Treatment.

Self Life

According to Drug and Cosmetic Rules Rule No. B

- Rasayoga containing Kaushthaushadhi along with Rasa/ Uparasa etc. 5 Years
- Rasayoga Containing only Rasa, Uparasa etc. 10 Years
- Rasayoga containing Naga, Vanga and Tamra bhasma — 5 Years

4.1.A Arogyavardhini Gutika

Reference: A.F.I.-I, Rasayoga, 20:4, R.R.S. Visarpa Chi. 20/106

रसगन्धकलोहाभ्रशुल्बभस्म समांशकम्।
त्रिफला द्विगुणा प्रोक्ता त्रिगुणञ्च शिलाजतु।।
चतुर्गुणं पुरं शुद्धं चित्रमूलं च तत्समम्।
तिक्ता सर्वसमा ज्ञेया सर्वं सञ्चूर्ण्य यत्नतः।।
निम्बवृक्षदलाम्भोभिर्मर्दयेद्दिनावधि।
ततश्च वटिका कार्या राजकोलफलोपमा।।
मण्डलं सेविता सैषा हन्ति कुष्ठान्यशेषतः।
वातपित्तकफोद्भूताञ्ज्वरान्नानाप्रकारजान्।।
देया पञ्चदिने जाते ज्वरे रोगे वटी शुभा।
पाचनी दीपनी पथ्या हृद्या मेदोविनाशिनी।।
मलशुद्धिकरी नित्यं दुर्धर्षक्षुत्प्रवर्तिनी।
बहुनात्र किमुक्तेन सर्वरोगेषु शस्यते।।
आरोग्यवर्धनी नाम्ना गुटिकेयं प्रकीर्तिता।
सर्वरोगप्रशमनी श्रीनागार्जुनयोगिना।।

(R.R.S. Visarpa Chi., 20/106-112)

Ingredients Used

Drug Name	Part Used	Proportion
Shuddha Parada	–	1 Part
Shuddha Gandhaka	–	1 Part
Lauha Bhasma	–	1 Part
Abhraka Bhasma	–	1 Part
Tamra Bhasma	–	1 Part
Haritaki	P.	2 Parts
Bibhitaki	P.	2 Parts
Amalaki	P.	2 Parts
Shuddha Shilajatu	–	3 Parts

Drug Name	Part Used	Proportion
Shuddha Guggulu	–	4 Parts
Eranda	Rt.	4 Parts
Katuki	Rt.	22 Parts
Nimba Svarasa (For Mardana)	Lf.	Q.S. (2 Days)

Procedure:

1. Collect all the ingridents of Arogyavardhini Gutika.
2. First, prepare Kajjali by triturating Shuddha Parada and Suddha Gandhaka in a mortar (Khalva Yantra).
3. Add the rest of the ingredients and grind well to ensure uniform mixing.
4. Add an appropriate quantity of Nimba Patra Svarasa and continue triturate for two days.
5. Shape the mixture into pills the size of a big Badara Phala (Raja Kola). However, Arogya Vardhini Gutikas are usually prepared to weigh 3 Ratti each.
6. Dry the pills in the shade.
7. Preserve the dried pills in a glass container.

Dose: 250-500 mg.

Anupana: Ardaraka Svarasa, Honey, Nimba Svarasa, Water, Milk.

Indications: Jirnajvara, Medo Dosha, Kushtha, Yakrit Vikara.

PHARMACODYNAMICS

1. **Detoxification and Purification:** Haritaki, Bibhitaki, and Amalaki, which help in eliminating toxins from the body. This purification process aids in the management of various disorders by removing accumulated wastes and improving metabolic functions.
2. **Anti-inflammatory:** The combination of ingredients in Arogyavardhini Gutika exhibits significant anti-inflammatory properties. This helps in reducing inflammation associated with conditions such as Jirnajvara (... (fat metabolism disorders), and Kushtha (skin disorders), providing relief from pain and swelling.
3. **Immunomodulatory:** Shuddha Parada and Shuddha Gandhaka contribute to the immunomodulatory effects of the formulation. They help in enhancing the body's immune response, thereby aiding in the management of various infections and autoimmune disorders.
4. **Hepatoprotective:** Arogyavardhini Gutika supports liver health and functionIt helps in managing Yakrit Vikara (liver disorders) by promoting the regeneration of hepatic cells, improving liver function, and protecting the liver from damage caused by toxins and free radicals.
5. **Metabolic Regulation:** The inclusion of Eranda and Katuki roots helps regulate metabolism, especially fat metabolism. This can be beneficial in conditions related to lipid metabolism disorders and obesity.

PHARMACOKINETICS

1. **Absorption:** The active constituents of Arogyavardhini Gutika are absorbed primarily in the gastrointestinal tract after oral administration.
2. **Metabolism:** Once absorbed, the herbal compounds undergo metabolism in the liver, where they may be transformed into active metabolites or excreted as waste products.
3. **Distribution:** The metabolites and active compounds are distributed throughout the body via the bloodstream, reaching target organs such as the liver, skin, and immune system.
4. **Elimination:** Any unutilized constituents or metabolites are primarily eliminated through urine and feces. The duration of action and elimination half-life may vary depending on the specific ingredients and individual factors.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Arogyavardhini Vati: A Theoritical Analysis	Santosh Pal, PG Scholar, PG Department of Dravyaguna Vigyana, National Institute of Ayurveda, Jaipur, (Raj) India	Arogyavardhini vati harmonizes the three Doshas, detoxifies the liver, aids in fatty liver conditions, and promotes a healthy digestive system without significant toxic effects. It facilitates assimilation of excess oily substances, aids in liquid digestion, and reduces adipose tissue oiliness. To ensure efficacy, it should be taken with various adjuncts, but self-medication must be avoided to prevent potential adverse effects.
2.	Role of Efficacy of Arogyavardhinivati in Gastrointestinal Disorders	Dr. Gururaj S. Varnale, Assistant Professor, Department of Rasashastra and Bhaishajya Kalpana, Dhanwantari Ayurved Medical College, Udgir MHA. India	The study finds that Arogyavardhini vati enhances digestion, promotes nutrient absorption, balances body fats, and detoxifies without toxic effects on vital organs. It harmonizes Doshas, supports liver function, and sustains digestive health. Ingredients like Tamra bhasma boost enzyme release, and Chitraka aids digestion. Arogyavardhini vati regulates gastrointestinal processes for healing.

Sr.No.	Article Name	Author Name	Result
3.	Clinical Study of Arogyavardhini Compound and Lifestyle Modification in Management of Metabolic Syndrome: A Double Blind Placebo Controlled Randomized Clinical Trial	Bharatkumar Chhaganbhai Padhar Department of Kayachikitsa, National Institute of Ayurveda, Jaipur, Rajasthan, India	Seventy-five patients were randomly assigned to two groups: one received lifestyle modification alone, the other received lifestyle modification along with Arogyavardhini compound for 8 weeks. Thirty-five patients completed each treatment. Results showed that lifestyle modification alone reduced waist circumference by 1.32%, serum triglycerides by 5.81%, and systolic blood pressure by 4.43%, while increasing fasting blood sugar by 3.82%. In contrast, the group receiving Arogyavardhini compound experienced reductions of 3.06%, 18.03%, and 6.89% in these parameters, respectively, with a 2.48% decrease in fasting blood sugar. Both groups saw significant decreases in waist circumference and systolic blood pressure, but the combined treatment was more effective in managing metabolic syndrome.
4.	The Effect of Arogyavardhini Vati and Phalatrikadi Kvatha in Non-Alcoholic Fatty Liver Disease – Case Studies	Ashok Kumar Panda, Research Officer, Department of Clinical Research, National Institute of Ayurveda Drug Development, Kolkota, CCRAS, Ministry of AYUSH, Government of India.	Arogyavardhini vati and Phalatrikadi kvatha were used to treat two cases of non-alcoholic fatty liver disease in a male and a female patient over 12 weeks. Tests were conducted at baseline and at 4, 8, and 12 weeks, showing no side effects and normal liver function, hematology, renal function, and cholesterol levels. Liver enzymes and echogenicity returned to normal by the end of treatment.
5.	Conceptual study of Arogyavardhini Vati	Vrushali Dipak Ghule, PG Scholar, PG Department of Rasashastra and Bhaishajya Kalpana.	This study aims to consolidate existing information and literature on the classical formulation "Arogyavarddhini Vati." Recognized in the Ayurvedic Formulary of India, it is deemed safe and efficacious for treating hyperlipidemia, ear discharge, and exhibiting hepatoprotective and antioxidant properties. Additionally, it finds utility in conditions such as jaundice, skin disorders, fevers, edema, indigestion, and obesity. This article will provide a comprehensive review of "Arogyavardhini Vati."
6.	Quality Control Parameters of Arogyavardhini Rasa Prepared by Classical Method	Yuga Raj Sapkota, Ph.D. (Ayu.) Scholar, Dept. of Rasashastra & Bhaishajya Kalpana, I.P.G.T. & R.A., Gujarat Ayurved University, Jamnagar-361008, Gujarat, India	The study evaluated the quality control parameters of Arogyavardhini Rasa using one pilot and three main batches as per Rasaratnasamucchaya. It analyzed physicochemical parameters, functional groups, chromatography, and elemental estimation. Results indicated that 2500 ml Svarasa was needed from 506 gms of powdered raw drugs, yielding 605 gm with % yield of 119.56% and % weight gain of 19.56%. Functional groups and HPTLC revealed 11 and 8 bands at 254 nm and 366 nm. Consistency across batches suggests a standardized manufacturing process based on pharmaceutical processes, physicochemical tests, and HPTLC profile.
7.	A Literature Review of Arogyavardhini Vati	Dr. Shivraj Singh, P.G. Scholar, Madan Mohan Malviya Govt. Ayurveda College, Udaipur (Raj.) India.	Arogyavardhini Vati, a popular Ayurvedic remedy, effectively manages various conditions: Its Kapha-Pitta Shamaka and Shothakara properties treat skin diseases like Kushta and Mukhdushika. Vatanulomaka and Rechana actions alleviate constipation (Malavashtambha). Arogyavarddhini Vati reduces weight by eliminating Ama and waste products from the body, addressing Medoroga. It efficiently manages Annavaha Strotas disorders, including anorexia, by balancing Vata, Pitta, and Kapha and enhancing digestion. Properties like Dipana, Pachana, Pathya, Tridoshashamaka and Strotoshodhaka alleviate symptoms of anaemia.
8.	Pharmaceutical Standardization and Physicochemical Analysis of Arogyavardhini Vati	Dasi Padmaja, Assistant Professor & PhD Scholar, Dept. of Kaya Chikitsa, Dr. NRS Govt. Ayurvedic College, Vijayawada, Andhra Pradesh, India	Arogyavardhini Gutika Results Description— Black coloured round shaped tablet with beveled edges Uniformity of weight— 96.63% to 104.7% Disintegration time— 11min 48 sec Total ash— 15.73% w/w Acid insoluble ash - 5.197% w/w Loss on drying at 105°C— 10.32% w/w Water Soluble Extractive(WSE)— 34.78% w/w Alcohol Soluble Extractive(ASE)— 37.55% w/w Hardness— 2.4kg/cm^2

4.1.8 Kumara Kalyana Rasa

Reference: A.F.I.-I, Rasayoga, 20:9, B.R. Balaroga

सिन्दूरं मौक्तिकं हेम व्योमायो हेममाक्षिकम्।
कन्यारसेन सम्मर्द्य कुर्यान्मुद्गमिता वटी।।
वटिकां वटिकार्द्धं वा वयोऽवस्थां विविच्य च।
क्षीरेण सितया सार्द्धं बालेषु विनियोजयेत्।।
कुमाराणां ज्वरं श्वासं वमनं पारिगर्भिकम्।
ग्रहदोषाञ्च निखिलान् स्तन्यस्याग्रहणं तथा।।
कामलामतिसारश्च कृशकां वह्निवैकृतम्।
रसः कुमारकल्याणो नाशयेन्नात्र संशयः।।

(B.R. Balaroga, 71/119-122)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Rasa Sindura	–	1 Part
Mauktika Bhasma	–	1 Part
Hema Bhasma	–	1 Part
Abharaka	–	1 Part
Lauha Bhasma	–	1 Part
Makshika Bhasma	–	1 Part
Kumari Rasa	Lf.	Q.S. Mardana

Procedure:

1. Collect all the ingridents of Kumara Kalyana Rasa.
2. Take Rasa sindura triturating properly by Khalva Yantra.
3. Add the rest of the ingredients and mix well to ensure uniform mixing.
4. Add an appropriate quantity of Kumari and continue triturate until it becomes suitable for making tablets or pills, then roll it in tablets or pills.
5. Shape the mixture into pills the size of a monga (62.5 mg). However, Kumara Kalyana Rasa are usually prepared to weight 1/2 Ratti each.
6. Dry the pills in the shade and store it.

Dose: 62.5 mg.

Anupana: Milk, Honey, Sita.

Indications: Bala Roga, Atisara, Kamala, Jvara, Kasa, Shvasa, Phakka Roga, Parigarbhika Roga, Stanyadvesha, Graha Dosha, Krishata, Agni Vikriti.

PHARMACODYNAMICS

1. **Antipyretic and Immunomodulatory**: Kumara Kalyana Rasa contains ingredients like Rasa Sindura and Hema Bhasma, which possess antipyretic properties. These components help in reducing fever (Jvara) by lowering body temperature. Additionally, the formulation may exert immunomodulatory effects, enhancing the body's defense mechanisms against infections.
2. **Hepatoprotective**: The inclusion of Mauktika Bhasma and Abhraka contributes to the hepatoprotective properties of Kumara Kalyana Rasa. This can be beneficial in managing liver disorders such as Kamala (jaundice) by promoting liver health and improving liver function.
3. **Respiratory Support**: Kumara Kalyana Rasa is indicated for conditions like Kasa (cough) and Shvasa (breathlessness), suggesting its potential respiratory support properties. It may help alleviate respiratory symptoms and improve lung function.
4. **Gastrointestinal Benefits**: The formulation is beneficial in addressing gastrointestinal disorders like Atisara (diarrhea) and Phakka Roga (indigestion). It may help regulate bowel movements, reduce diarrhea episodes, and improve digestive function.
5. **Obstetric and Gynecological Support**: Kumara Kalyana Rasa is indicated for Parigarbhika Roga (disorders during pregnancy) and Stanyadvesha (aversion to breast feeding). It may help manage complications associated with pregnancy and lactation, ensuring maternal and fetal well-being.

PHARMACOKINETICS

1. **Absorption**: The bioavailability of the active constituents in Kumara Kalyana Rasa may vary depending on their solubility and formulation. Oral administration facilitates the absorption of the ingredients through the gastrointestinal tract.
2. **Metabolism**: Once absorbed, the herbal and mineral components undergo metabolism in the liver and other tissues. They may be converted into active metabolites or excreted as waste products.
3. **Distribution**: The active compounds are distributed throughout the body via the bloodstream, reaching target organs such as the liver, lungs, gastrointestinal tract, and reproductive system.
4. **Elimination**: Any unutilized constituents or metabolites are primarily eliminated through urine and feces. The duration of action and elimination half-life may vary based on individual factors and the specific ingredients in the formulation.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Ayurveda Properties and Therapeutics Importance of Kumarkalyan Rasa	Vd Sangeeta Vidhale (Rithe) Associate Professor and H.O.D. Kaumarbhritya, MUPS Ayurved College Risod, Dist. Washim, India.	Kumarakalyana Rasa, an Ayurvedic medicine for children, effectively treats breathing problems, cough, jaundice, fever, diarrhea, and digestive issues. It comprises Rasa Sindura, Moti Pishti, Svarna Bhasma, Abhraka Bhasma, Lauha Bhasma, and Svarna Makshika Bhasma. This formulation provides immune-stimulatory, adaptogenic, and Rasayana effects, offering antitussive, anti-asthmatic, antibacterial, and digestive stimulant effects. It pacifies Tridoshas, enhances Rasa, Rakta, Asthi, and Majja, benefiting conditions like anaemia, rickets, diarrhea, and respiratory diseases, while also boosting mental strength.
2.	Role of Kumar Kalyana Rasa and Sitopaladi Churna in Children's Development	Meena Rekhraj, Prof. & H.O.D., Dept. of Sharir Kriya, M.M.M. Govt., Ayurveda College, Udaipur, Rajasthan, India	The study included 12 children selected from the O.P.D. and I.P.D. of Vd. Prem Shankar Ayurveda Hospital, Colleges Campus, and M.M.M. Government Ayurved College, Udaipur. Kumara Kalyana Rasa and Sitopaladi Churna were administered at a dosage of 1-2 grams twice daily with honey before meals for three months. Follow-up occurred every 15 days. Baseline assessment was conducted after selecting children based on inclusion and exclusion criteria. Results indicate that oral consumption of Kumara Kalyana Rasa and Sitopaladi Churna with honey improves digestion, immunity, and overall growth.

4.1.c Garbhapala Rasa

Reference: A.F.I.-II, Rasayoga, 16:14, R.T.Sa.Part I, 140

धान्यकं कृष्णाजीरं च चव्यं दाक्षा सुरदुमः।
कर्षमानं पृथक् सर्वं कर्षार्धं लोहभस्म च।।
सप्ताहं मर्दयेत्खल्ले विष्णुकान्तारसेन च।
गुञ्जामात्रा च वटिका दाक्षाक्वाथेन योजयेत्।।
मासप्रथममारभ्य नवमासान्तमेव च।
गर्भिणीरोगनाशार्थं गर्भपालरसः स्मृतः।।

(Rasachandashu, p. 614/667-640)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Shuddha Hingula	–	12 gms
Naga Bhasma	–	12 gms
Vanga Bhasma	–	12 gms
Tvak	St. Bk.	12 gms
Tejapatra	Lf.	12 gms
Ela	Sd.	12 gms
Shunthi	Rz.	12 gms
Maricha	Fr.	12 gms
Pippali	Fr.	12 gms
Dhanyaka	Fr.	12 gms
Krishna Jiraka	Fr.	12 gms
Chavya	St.	12 gms
Mridvika	Dr. Fr.	12 gms
Devadaru	Ht. Wd.	12 gms
Lauha Bhasma	–	6 gms
Aparajita Svarasa	Pl.	Q.S. (Mardana for 7 days)

Procedure:

1. Take all the required dried ingredients for Garbhapala Rasa. Ensure each ingredient is clean and free from impurities.
2. Using a Khalva Yantra (traditional mortar and pestle) or a grinder, grind each ingredients from Tvak to Devadaru separately into a fine powder.
3. Filter each powdered ingredient through a clean cloth to remove any coarse particles.
4. Combine all the filtered powders and remaining drugs together in a clean, dry container. Mix thoroughly to ensure a uniform blend of all ingredients.
5. Filter the compound powder mixture once again through a clean cloth to ensure a fine consistency.
6. Adding Aparajita Svarasa and triturate well, until it becomes suitable for making tablets or pills, then roll it into tablets or pills.
7. Expose the tray to sunlight or under hot air oven for several hours to days until the material is completely dry.
8. Once fully dried, collect the dried material. This final product is called Garbhapala Rasa.
9. Store the Garbhapala Rasa in a clean, dry, airtight container to preserve its potency.

Dose: 125 – 250 mg.

Anupana: Draksha Jala (Take 30 gms Draksha amd grind it in 120 gm of water for obtaining Draksha Jala).

Indications: Garbhapata, Grabhasrava, Grabhini Roga, Pradara, Shula, Vibandha, Siro Roga, Chhardi, Agnimandya.

PHARMACODYNAMICS

1. **Abortifacient and Uterotonic:** Garbhapala Rasa contains ingredients like Shuddha Hingula, Naga Bhasma, and Vanga Bhasma, known for their abortifacient properties. These components help

in inducing abortion (Garbhapata) and promoting uterine contractions. The formulation may also address conditions like Grabhasrava (excessive vaginal discharge) and Grabhini Roga (disorders of pregnancy).

2. **Digestive Stimulant:** Herbs like Shunthi, Maricha, Pippali, and Dhanyaka in Garbhapala Rasa act as digestive stimulants. They help improve digestion (Agnimandya), alleviate abdominal pain (Shula), and relieve constipation (Vibandha).
3. **Antiemetic:** Garbhapala Rasa may possess antiemetic properties attributed to ingredients like Shunthi and Maricha. These components help in alleviating nausea and vomiting (Chhardi).
4. **Anti-inflammatory:** The formulation may exhibit anti-inflammatory effects due to the presence of herbs like Chavya and Devadaru. This action can be beneficial in managing conditions like Siro Roga (headaches) by reducing inflammation.

PHARMACOKINETICS

1. **Absorption:** The bioavailability of Garbhapala Rasa's constituents depends on their solubility and formulation. Oral administration facilitates absorption through the gastrointestinal tract.
2. **Metabolism:** Once absorbed, the herbal and mineral components undergo metabolism in the liver and other tissues. They may be metabolized into active compounds or excreted as waste products.
3. **Distribution:** The active compounds are distributed throughout the body via the bloodstream, reaching target organs such as the uterus, gastrointestinal tract, and central nervous system.
4. **Elimination:** Any unutilized constituents or metabolites are primarily eliminated through urine and feces. The duration of action and elimination half-life may vary based on individual factors and the specific ingredients in the formulation.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Clinical study of Garbhapala Rasa for Metals Determination, Biochemical and Hematological Profiling Infeto-Maternal Serum	Dr. Deepa Mishra IIC & Lecturer; Department of Prasuti & Stri roga, A & U Tibbia College and Hospital, Govt. of NCT of Delhi Karol Bagh, New Delhi.	Thirty-six parturient women received 'Garbhpala Rasa' from the first trimester to the 8th month or from the second trimester until the last month of gestation. Cord blood sampling was conducted for metal determination, alongside hematological and biochemical tests initially and in the last month of gestation. Normal blood parameters indicated the drug's non-toxic nature. Mercury (Hg) and lead (Pb) levels in maternal serum were 8.78 ppm and 13.44 ug/dl, respectively. Among those who stopped the drug one month before delivery, umbilical cord blood showed Hg and Pb levels of 2.45 ppm and 10.101 ug/dl. Pregnant women who continued 'Garbhapala Rasa' until delivery had levels of 4.92 ppm and 11.14 ug/dl, respectively. Despite detecting Hg and Pb in both maternal and umbilical cord blood, levels were well below permissible limits.
2.	Effect of 'Garbhpal Rasa' on Pregnancy Induced Nausea & Vomiting (NVP)	Dr. Deepa Mishra IIC & Lecturer; Department of Prasuti & Stri roga, A & U Tibbia College and Hospital, Govt. of NCT of Delhi Karol Bagh, New Delhi.	Ninety-four pregnant women were divided into two groups: 55 received 120 mg twice daily of 'Garbhpala Rasa' with folic acid, while 39 received folic acid only. The study aimed to evaluate 'Garbhpala Rasa' efficacy in reducing pregnancy-related nausea and vomiting, assessing subjective symptoms and hematological/biochemical parameters. Promising results were observed in the 'Garbhapala Rasa' group.
3.	Controlled clinical Study to Evaluate Protective Role of Garbhapalras In Garbhini Avastha.	Acharekar Gandhali, M.S. Ayu(Prasutitantra Streerog), Associate Professor, B.R. Harne Ayurved College, Karav, Vanganl, Badalapur, Thane, MHA, India	In this study, 100 pregnant women beyond 20 weeks' gestation were included. They underwent assessment of various parameters, including haematological, biochemical, and ultrasonography measures like FL/AC ratio, fetal weight, AFI, and Umbilical artery S/D ratio. Administration of Garbhapala Rasa at 125 mg BID with milk showed safe haematological and biochemical profiles. The trial group demonstrated improved hemoglobin levels. Garbhapala Rasa, with its properties enhancing metabolism, facilitated the production of high-quality Aahara rasa, supporting the generation of essential Dhatu and Upadhatu in pregnant women.
4.	Acute Oral Toxicity Study of Garbhapala Rasa in Mice	Shree Dhootapapeshwar Ayurvedic Research Foundation, Panvel, Raigad-410206, Maharashtra.	The study aimed to evaluate the acute toxicity of Garbhapala Rasa in mice by administering it orally at 10 times the therapeutic dose. Over 48 hours, there were no instances of mortality or adverse effects observed, indicating its non-toxic nature. Additionally, no abnormal behaviour, physical changes, or organ abnormalities were noted. This confirms the safety of Garbhapala Rasa, even at higher doses, in mice.

4.1.D Chandraprabha Vati

Reference: A.F.I.-I, Vati Gutika, 12:10, Sha.Sa.M.

चन्द्रप्रभा वचा मुस्तं भूनिम्बामृतदारुकम्।
हरिद्रातिविषा दार्वी पिप्पलीमूलचित्रकौ।।
धान्यकं त्रिफला चव्यं विडङ्गं गजपिप्पली।
व्योषं माक्षिकधातुश्च द्वौ क्षारौ लवणत्रयम्।।
एतानि शाणमात्राणि प्रत्येकं कारयेद् बुधः।
त्रिवृद्दन्तीपत्रकं च त्वगेला वंशरोचना।।
प्रत्येकं कर्षमात्राणि कुर्यादेतानि बुद्धिमान्।
द्विकर्षं हतलोहं स्याच्चतुष्कर्षा सिता भवेत्।।
शिलाजत्वष्टकर्षं स्यादष्टौ कर्षाश्च गुग्गुलोः।
एभिरेकत्र सङ्क्षुण्णैः कर्तव्या गुटिका शुभा।।
चन्द्रप्रभेति विख्याता सर्वरोगप्रणाशिनी।
प्रमेहान् विंशतिं कृच्छ्रं मूत्राघातं तथाश्मरीम्।।
विबन्धाऽऽनाहशूलानि मेहनं ग्रन्थिमर्बुदम्।
अन्त्रवृद्धिं कटीशूलं श्वासं कासं विचर्चिकाम्।।
अण्डवृद्धिं तथा पाण्डुं कामलां च हलीमकम्।
कुष्ठान्यर्शांसि कण्डूं च प्लीहोदरभगन्दरम्।।
दन्तरोगं नेत्ररोगं स्त्रीणामार्तवजां रुजम्।
पुंसां शुक्रगतान् दोषान् मन्दाग्निमरुचिं तथा।।
वायुं पित्तं कफं हन्याद् वल्या वृष्या रसायनी।
चन्द्रप्रभायां कर्षस्तु चतुःशाणो विधीयते।।

(Sha.S.M.K., 7/40-49)

Ingredients Used

Drug Name	Part Used	Proportion
Chandraprabha	Sub. Ext.	3 gms
Vacha	Rz.	3 gms
Musta	Rz.	3 gms
Kiratatikta	Pl.	3 gms
Guduchi	St.	3 gms
Devadaru	Ht. Wd.	3 gms
Haridra	Rz.	3 gms
Ativisha	Rt. Tr.	3 gms
Darvi	St.	3 gms
Pippali	Rt.	3 gms
Chitraka	Rt.	3 gms
Dhanyaka	Fr.	3 gms
Haritaki	P.	3 gms
Bibhitaki	P.	3 gms
Amalaki	P.	3 gms
Chavya	St.	3 gms
Vidanga	Fr.	3 gms
Gajapippali	Fr.	3 gms
Shunthi	Rz.	3 gms
Maricha	Fr.	3 gms
Pippali	Fr.	3 gms
Maksika Bhasma	–	3 gms
Yava Kshara	Pl.	3 gms
Sarji Kshara	–	3 gms
Saindhava Lavana	–	3 gms
Sauvarcala Lavana	–	3 gms
Vida Lavana	–	3 gms
Trivrita	Rt.	12 gms
Danti	Rt.	12 gms
Tejapatra	Lf.	12 gms
Tvaka	St. Bk.	12 gms
Ela	Sd.	12 gms
Vamshalochana	S.C.	12 gms
Lauha Bhasma	–	24 gms
Sita	–	48 gms
Shilajatu	–	96 gms
Guggulu	Exd.	96 gms

Procedure:

1. Take all the required dried ingredients for Chandraprabha Vati. Ensure each ingredient is clean and free from impurities.
2. Using a Khalva Yantra (traditional mortar and pestle) or a grinder, grind each ingredients from Chandraprabha to sita separately into a fine powder.
3. Take a vessel add shuddha guggulu and water. During heat guggulu is melted.
4. Add remaining ingredients and pounding properly until it becomes suitable for making tablets or pills, then roll it into tablets or pills.
5. Expose the tray to sunlight or under hot air oven for several hours to days until the material is completely dry.
6. Once fully dried, collect the dried material. This final product is called Chandraprabha Vati.
7. Store the Chandraprabha Vati in a clean, dry, airtight container to preserve its potency.

Dose: 250- 500 mg

Anupana: Water, Milk, Gungily Powder.

Indications: Vibandha, Anaha, Shula, Granthi, Pandu, Kamala, Mutrakrichchhra, Prameha, Ashmari, Arsha, Arbuda, Mutraghata, Antra Vriddhi, Kandu, Pliha Roga, Bhagandara Roga, Danta Roga, Netra Roga, Aruchi, Mandagni, Striroga, Artava Ruja, Shukra Dosha, Daurbalya.

Pharmacodynamics

1. **Diuretic and Lithotriptic:** Chandraprabha Vati contains herbs like Gokshura, Musta, and Daruharidra known for their diuretic properties, aiding in the elimination of urinary stones (Ashmari) and addressing urinary disorders (Mutrakrichchhra). It also acts as a lithotriptic, breaking down kidney stones.

2. **Anti-inflammatory and Analgesic**: Ingredients such as Haridra, Ativisha, and Devadaru possess anti-inflammatory and analgesic properties, providing relief from pain (Shula) and inflammation associated with conditions like arthritis and urinary tract infections.
3. **Antimicrobial**: Herbs like Chitraka, Pippali, and Guduchi exhibit antimicrobial effects, helping combat infections in the urinary tract and reproductive system, thereby alleviating symptoms of conditions like Prameha (diabetes) and Vibandha (constipation).
4. **Hepatoprotective**: Chandraprabha Vati's formulation, including herbs like Amalaki and Darvi, may have hepatoprotective properties, protecting the liver from damage and improving its function. This action is beneficial in managing liver disorders like Pandu (anaemia) and Kamala (jaundice).

Pharmacokinetics

1. **Absorption**: The herbal and mineral components of Chandraprabha Vati are absorbed through the gastrointestinal tract upon oral administration. The absorption rate may vary based on the individual's gastrointestinal health and other factors.
2. **Metabolism**: Once absorbed, the active constituents undergo metabolism primarily in the liver. The metabolism of herbal compounds may involve various enzymatic processes, leading to the formation of metabolites with therapeutic activity.
3. **Distribution**: The active ingredients are distributed throughout the body via the bloodstream, reaching target organs such as the kidneys, liver, and reproductive system The distribution process determines the extent of the formulation's therapeutic effects.
4. **Elimination**: Any unutilized constituents or metabolites are primarily eliminated through urine and feces. The duration of action and elimination half-life may vary based on individual factors and the specific ingredients in the formulation. Regular intake is often required to maintain therapeutic levels in the body.

Research Updates

Sr.No.	Article Name	Author Name	Result
1.	A Critical Review on Chandraprabha Vati—An Ayurvedic Formulation	Poornasri Jagani, 2nd year PG Scholar, Department of Kayachikitsa, Sri Jayendra Saraswathi Ayurveda College and Hospital, Nazarathpet, Chennai, Tamilnadu, India	Chandraprabha Vati, a significant formulation in ancient texts, is known as Sarva Roga Pranaashini for its ability to treat various diseases. This article discusses 11 formulations of Chandraprabha Vati, with different variations mentioned in various texts. Ingredients vary across references, with some including Guduchi and others mentioning Karpura or Shatavari. Its composition typically includes Katu, Tikta, Kashaya, and Madhura Rasa, with effects mainly targeting urinary and genital systems. Chandraprabha Vati is primarily prescribed for Prameha, although it also finds application in conditions like Svitra Kushtha and Jvara according to different texts.
2.	Pharmaco-Therapeutic Profiles of Chandraprabhavati–An Ayurvedic Herbo-Mineral Formulation	Sushama.B, Department of Dravyaguna, Institute for Post Graduate Teaching and Research in Ayurveda, Gujarat Ayurveda University, Jamnagar-361008, Gujarat, India	Chandraprabha Vati contains alkaline substances reducing urine acidity. Pippalimula and Vacha act as sedatives, aiding in managing hypertension, diabetes, and obesity. Trikatu, Chavya, Musta, Elavaluka, Lavanas, and Ksharas relieve Mandagni, preventing diabetic neuropathy and retinopathy. It addresses urinary issues like Mutraghata, Mutrakrichhra, and Ashmari, and has anti-inflammatory properties benefiting conditions like cystitis, BPH, and epididymitis. It acts as an analgesic for dysmenorrhea and lumbago, promotes spermatogenesis, and boosts immunity with Triphala and Guduchi. Chandraprabha Vati also protects the liver, acts as a hematopoietic agent, and is suitable for hypertension and diabetes management due to low salt and sugar content per tablet.
3.	Observations on Clinical Safety of Chandraprabha Vati–An Ayurvedic Metallo-Herbo Mineral Formulation	AK Tripathi, 1 Dhanwantary Ayurvedic College, Sector 40B, Chandigarh	This observational study aimed to assess the safety of Chandraprabha Vati, reviewing dose-related adverse effects. Data from hospital records surveyed prescription patterns and adverse reactions. Oral doses of 500-1000 mg/day over 1-4 months showed no serious adverse reactions or toxicity symptoms, indicating Chandraprabha Vati's safety within prescribed limits.

Sr.No.	Article Name	Author Name	Result
4.	Evaluation of Pharmacological Activity of Chadraprabha Vati on Serum of Albino Wistar Strain Rats	V. Palanivel, Department of Pharmacology, Mahathi College of Pharmacy, Madanapalle, Andhra Pradesh, India	The study aimed to assess the acute and sub-acute toxicity profiles of certain Ayurvedic Bhasma, focusing on potential side effects from heavy metal presence. Chandraprabha Vati pills were converted into liquid form, administered to rats at doses of 50 and 500 mg/kg for 28 days. Doses were calculated based on human equivalents and given orally, with blood collected on days 7, 14, and 28 for histopathological analysis post-sacrifice.
5.	Antidiabetic Activity of Chandraprabha vati–A classical Ayurvedic Formulation	Manish M. Wanjari, National Research Institute for Ayurveda—Siddha Human Resource Development, Gwalior, 474009, Madhya Pradesh, India	The study aimed to investigate Chandraprabha Vati's effects on experimentally-induced hyperglycemia and lipid profile alterations. Fifty-five Wistar rats were used, administered graded doses of Chandraprabha Vati orally for 7 days. Chandraprabha Vati normalized impaired glucose tolerance and significantly reduced plasma glucose levels in alloxan-hyperglycemic rats, along with lowering cholesterol and triglycerides. Effects were comparable to metformin. These findings suggest Chandraprabha Vati's potential as an anti-hyperglycemic agent and for correcting Prameha in clinical settings.
6.	Quality Control Studies on Chandraprabha Vati	R.P. Saralla, Centre for Advanced Research in Indian System of Medicine (CARISM), SASTRA University, Thanjavur, Tamil Nadu, India.	This study compares the quality of Chandraprabha Vati from market sources with an in-house preparation following Vaidya Yoga Ratnavali standards. It assesses macroscopic and microscopic features, HPTLC and GC-MS profiles, as well as parameters like hardness, weight uniformity, disintegration time, physicochemical constants, heavy metal content, and microbial load. These findings aid in establishing standards for this Ayurvedic drug and improving the quality of Ayurvedic preparations.

4.1.E Pravala Panchamrita Rasa

Reference: A.F.I.-II, Rasayoga, 16:37, B.R.Gulma

प्रवालमुक्ताफलशङ्खशुक्तिकपर्दिकानां च समांशभागम्।
प्रवालमात्रं द्विगुणं प्रयोज्यं सर्वैः समांशं रविदुग्धमेव।।
एकीकृतं तत्खलु भाण्डमध्ये क्षिप्त्वा मुखे बन्धनमत्र योज्यम्।
पटुं विदध्यादतिशीतले च उद्धृत्य तद्धस्म क्षिपेत्करण्डे।।
नित्यं द्विवारं प्रति पाकयुक्तं वल्लप्रमाणं हि नरेण सेव्यम्।
आनाहगुल्मोदरप्लीहकामश्वासाग्निमान्द्यान् कफमारुतोत्थान्।।
अजीर्णमुद्गारहृदामयघ्नं ग्रहण्यतीसारविकारनाशनम्।।
मेहामयं मूत्ररोगं मूत्रकृच्छ्रं तथाश्मरीम्।
नाशयेन्नात्र सन्देहः सत्यं गुरुवचो यथा।।
पथ्याश्रितं भोजनमादरेण समाचरेन्निर्मलचित्तवृत्त्या।
प्रवालपञ्चामृतनामधेयो योगोत्तमः सर्वगदापहारी।।

(B.R., Gulma Roga., 32/139-143)

Ingredients Used

Drug Name	Part Used	Proportion
Mukta Bhasma	–	1 Part
Shankha Bhasma	–	1 Part
Muktasukti Bhasma	–	1 Part
Kapardika Bhasma	–	1 Part
Pravala Bhasma	–	3 Parts
Arka Dugdha	Lf.	7 Parts for Mardana

Procedure:

1. Take all the required dried ingredients for Pravala Panchamrita Rasa. Ensure each ingredient is clean and free from impurities.
2. Using a Khalva Yantra (traditional mortar and pestle) and mix thoroughly to ensure a uniform blend of all ingredients.
3. Adding Arka Dugdha and triturate well, until it becomes suitable for making tablets or pills, then roll it into tablets or pills.
4. Expose the tray to sunlight or under hot air oven for several hours to days until the material is completely dry.
5. Store the Pravala Panchamrita Rasa in a clean, dry, airtight container to preserve its potency.

Dose: 250 mg.

Indications: Anaha, Gulma, Udara roga, Pliha Roga, Kasa, Svasa, Agnimandya, Ajirna, Grahani, Atisara, Hridroga.

Pharmacodynamics

1. **Antacid and Digestive:** Pravala Panchamrita Rasa, with ingredients like Mukta Bhasma and Sankha Bhasma, acts as an antacid, neutralizing excess stomach acidIt aids in digestion by promoting the secretion of digestive enzymes and improving gastrointestinal motility, making it effective in treating conditions like Ajirna (indigestion) and Grahani (irritable bowel syndrome).
2. **Anti-inflammatory:** The formulation contains Pravala Bhasma, known for its anti-inflammatory properties. It helps alleviate inflammation associated with gastrointestinal disorders such

as Udara roga (abdominal diseases), Pliha Roga (spleen disorders), and Hridroga (heart diseases).

3. **Carminative**: Pravala Panchamrita Rasa has carminative properties due to the presence of Kapardika Bhasma and Muktasukti Bhasma, which help relieve flatulence and abdominal distension (Anaha) by expelling gas from the gastrointestinal tract.
4. **Expectorant**: The Arka Dugdha (milk of Calotropis procera) used for Mardana in this formulation may act as an expectorant, helping to expel mucus and phlegm from the respiratory tract. This property is beneficial in managing respiratory conditions like Kasa (cough) and Shvasa (asthma).

PHARMACOKINETICS

1. **Absorption**: The bioavailability of Pravala Panchamrita Rasa's constituents depends on their solubility and the presence of other ingredients that may enhance or inhibit absorption. Mukta Bhasma and Shankha Bhasma are likely absorbed in the gastrointestinal tract.
2. **Metabolism**: Upon absorption, the constituents undergo metabolism primarily in the liver. Metabolic processes may involve the conversion of minerals into bioactive forms and the breakdown of herbal constituents into metabolites with therapeutic effects.
3. **Distribution**: The active ingredients are distributed via the bloodstream to target organs such as the stomach, intestines, spleen, and lungs, where they exert their pharmacological effects.
4. **Elimination**: Any unutilized constituents or metabolites are eliminated primarily through urine and feces. The duration of action and elimination half-life may vary based on individual factors and the specific ingredients in the formulation. Regular intake is often required to maintain therapeutic levels in the body.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Review on Pravala Panchamrita Rasa: A Natural Calcium Supplement	Usha Sharma, Professor, P.G. Department of Rasa Shastra & Bhaishajya Kalpana, Uttarakhand Ayurved University, Rishikul Campus, Haridwar, Uttarakhand, India	Pravala Panchamrita Rasa, composed of ingredients from the Shuddha Varga, serves as a potent supplement for calcium deficiency. Its superior absorption and assimilation make it advantageous over synthetic calcium supplements. Unlike synthetic alternatives, it retains efficacy regardless of gastrointestinal health, making it beneficial for various disease conditions at therapeutic doses.
2.	Role of Praval Panchamrita in Amlapitta	Usha Sharma, Professor, P.G. Department of Rasa Shastra & Bhaishajya Kalpana, Uttarakhand Ayurved University, Rishikul Campus, Haridwar, Uttarakhand, India	Thirty subjects aged 21-40, clinically diagnosed with Amlapitta, were randomly selected from our O.P.D. Exclusion criteria included hematemesis, bleeding ulcers, pregnancy, and major systemic disorders. Administered at 1 tab bd for 30 days, Pravala Panchamrita tablets (procured from Dhutpapeshvara) yielded complete remission in 46.6% of cases, particularly effective in cases with increased drava guna of pitta. Significant improvement was noted in symptoms like Aruchi, amlodgar, chhardi, hritshul, and udarashula. Praval Panchamrut emerged as a cost-effective, readily available, and easily prepared treatment for Amlapitta.
3.	Analytical Standardization of Pravala panchamrita Rasa	Julika, MD. Scholar P.G. Deptt. of Rasa Shastra and Bhaishajya Kalpana Uttarakhand Ayurved University, Rishikul Campus, Haridwar, Uttarakhand	Two samples of Pravala panchamrita rasa were prepared, exhibiting an average percentage yield of 65% with 35.0% loss. The formulation's average calcium percentage is 46.63, with an average pH of 12.55. Additional parameters include an average loss on drying at 105°C of 0.04%w/w, loss on ignition of 3.93%w/w, acid insoluble ash of 0.52%w/w, water soluble extractive value of 1.05%w/w, and alcohol soluble extractive of 9.48%w/w. Despite the availability of various medicines in the market, their standard parameters are lacking. Hence, this research aims to develop a safe and effective Ayurvedic medicine.

4.1.F Anandabhairava Rasa

Reference: A.F.I.-I, Rasayoga, 20:3, R.Sa.Sa. Jvara.

हिंगुलञ्च विषं व्योषं मरिचं टङ्कणं कणा।
जातीकोषसमं चूर्णं जम्बीरद्रवमर्दितम्।
रक्तिमानां वटीं कुर्यात् खादेदार्द्रकसंयुताम्।।
वटीद्वयं त्रयं वाऽपि संन्निपाते सुदारुणे।
ज्वरमष्टविधं हन्ति तथाऽतीसारनाशनः।।
जीर्णज्वरहरश्चैव तथा सर्वाङ्गभेदकः।
आमवातादिरोगाञ्च नाशयेदविकल्पतः।।

(R.Sa.Sa. Jvara., 2/103-105)

Ingredients Used

Drug Name	Part Used	Proportion
Shuddha Hingula	–	1 Part
Shuddha Vatsanabha	Rt. Tr.	1 Part
Shunthi	Rz.	1 Part
Pippali	Fr.	2 Parts
Maricha	Fr.	2 Parts
Shuddha Tankana	–	1 Part
Jatiphala	Ar.	1 Part
Jambira Svarasa	Fr.	Q.S. For Mardana

Procedure:

1. Take all the required dried ingredients for Anandabhairava Rasa. Ensure each ingredient is clean and free from impurities.
2. Using a Khalva Yantra (traditional mortar and pestle) or a grinder, grind each ingredients from Shunthi to Jatiphala separately into a fine powder.
3. Filter each powdered ingredient through a clean cloth to remove any coarse particles.
4. Combine all the filtered powders together in a clean, dry container. Mix thoroughly to ensure a uniform blend of all ingredients.
5. Filter the compound powder mixture once again through a clean cloth to ensure a fine consistency.
6. Adding Jambira svarasa and triturate well, until it becomes suitable for making tablets or pills, then roll it into tablets or pills.
7. Expose the tray to sunlight or under hot air oven for several hours to days until the material is completely dry.
8. Once fully dried, collect the dried material. This final product is called Anandabhairava Rasa.
9. Store the Anandabhairava Rasa in a clean, dry, airtight container to preserve its potency and freshness.

Dose: 250 mg.

Anupana: Ardraka Svarasa, Honey.

Indications: Jvara, Jvaraatisara, Amavata, Sannipataja Jvara, Ashmari, Prameha, Mutrakrichchhra.

Pharmacodynamics

1. **Antipyretic**: Anandbhairava Rasa exhibits potent antipyretic properties, primarily attributed to ingredients like Shunthi (ginger), Pippali (long pepper), and Maricha (black pepper). These ingredients possess thermogenic effects, inducing sweating and reducing fever.
2. **Anti-inflammatory**: The combination of Shuddha Vatsanabha (purified aconite) and Shuddha Hingula (purified cinnabar) provides anti-inflammatory effects, alleviating inflammation associated with conditions like Amavata (rheumatoid arthritis) and Sannipataja Jvara (fever due to a combination of doshas).
3. **Digestive Stimulant**: Shunthi, Pippali, and Maricha stimulate digestion and enhance gastrointestinal motility. This property aids in the management of Jvara atisara (fever with diarrhea) and Prameha (urinary disorders) by improving digestive function.
4. **Diuretic**: Anandabhairava Rasa may exhibit diuretic effects, helping in the management of conditions like Mutrakrichchhra (dysuria) and Ahsmari (urinary calculi) by increasing urine output and promoting the expulsion of renal stones.

Pharmacokinetics

1. **Absorption**: The ingredients in Anandabhairava Rasa are likely absorbed in the gastrointestinal tract, with faster absorption facilitated by the liquid form of Jambira Svarasa (lemon juice) used for Mardana.
2. **Metabolism**: Upon absorption, the constituents undergo hepatic metabolism, where they may be metabolized into active metabolites or conjugated with glucuronides for elimination.
3. **Distribution**: The active compounds are distributed via the bloodstream to various target organs, including the liver, kidneys, and inflammatory sites, where they exert their pharmacological effects.
4. **Elimination**: Any unutilized constituents or metabolites are primarily eliminated through urine and feces. The duration of action and elimination half-life may vary based on individual factors and the specific metabolism of each ingredient.

Research Updates

Sr. No.	Article Name	Author Name	Result
1.	A Comparative Study of Ananda Bhairava Rasa and Tribhuvana Kirti Rasa in the Management of Vata Kaphaja Jvara	Dr. Virendra Baburao Pawar M.D, Ph.D. Assistant Professor, Department of Kayachikitsa, Bharati Vidyapeeth Ayurved College and Hospital, Pune, MHA, India.	In a comparative single-blind study, 40 patients were randomly divided into two groups. Group A received Ananda Bhairava Rasa 250 mg twice daily, while Group B received Tribhuvanakirti Rasa 250 mg twice daily for 7 days, with daily follow-ups. Conducted at BVDU College of Ayurveda and Hospital affiliated with Bharati Medical Foundation in 2013 and 2014, results indicated both treatments equally

Sr. No.	Article Name	Author Name	Result
			effective in managing Vatakaphaja Jvara symptoms. Group B showed reduced Nidra compared to Group A. Statistical analysis confirmed the equal efficacy of both treatments. Conclusion: Both Ananda Bhairava Rasa and Tribhuvanakirti Rasa effectively manage Vatakaphaja Jvara symptoms.
2.	A Review Article on Ananda Bhairava Rasa with Special Refrence to Bhaishajya Ratnavali	Divya Rani Meghwa, P.G. Scholar, Department of Rasashasta & Bhaishajya Kalpana, Madan Mohan Malviya Govt. Ayurveda Collage, Udaipur (Raj.), India	Ananda Bhairava Rasa, classified as a Khalviya Rasayana, is a potent medicinal preparation used for treating Jvara and atisara. Due to its minimal, safe, and readily available ingredients, the formulation described in Bhaisajya Ratnavali is often selected for research and dissertation projects.
3.	Critical Review on Ananda Bhairava Rasa W.S.R. to Rasa Yoga Sagara	Dr. Sachin Sheth, Assistant Professor, Dept. of Rasashastra and Bhaishajya Kalpana, APM's Ayurved Mahavidyalaya, Sion, Mumbai, Maharashtra, India.	This paper provides comprehensive insights into the contents, dosage, Bhavana, Anupana, Pathya, and clinical indications of Ananda Bhairava Rasa, an essential formulation in Ayurvedic practice. It specifically reviews the 12 Pathabheda of Ananda Bhairava Rasa outlined in Rasayogasagara.
4.	Evaluation of Physio-Chemical and Antipyretic Activity of Ananda Bhairava Rasa	Dr. Varsha N., Department of Rasashastra & Bhaishajya Kalpana, Ramakrishna Ayurvedic Medical College, Hospital and Research Center, Bengaluru-560064, Karnataka, India.	Ananda Bhairavi Rasa shows antipyretic activity, comparable to Paracetamol, making it a promising alternative for fever treatment across diseases. Physicochemical analysis confirms its safety within normal limits, suggesting its potential as a safer antipyretic option in clinical practice.

4.1.6 Yogendra Rasa

Reference: A.F.I.-I, Rasayoga, 20:31, B.R.Vatavyadhi

विशुद्धं रससिन्दूरं तदर्द्धं शुद्धहाटकम्।
तत्समं कान्तलौहञ्च तत्समञ्चाभ्रमेव च।।
विशुद्धं मौक्तिकञ्चैव वङ्गञ्च तत्समं मतम्।
कुमारिकारसैर्भाव्यं धान्यराशौ दिनत्रयम्।।
ततो रक्तिद्वयमितां वटीं कुर्याद्विचक्षणः।
योगवाही रसो ह्येष सर्वरोगकुलान्तकत्।।
वातपित्तभवान् रोगान् प्रमेहान् बहुमूत्रताम्।
मूत्राघातमपस्मारं भगन्दरगुदामयान्।।
मूर्च्छोन्मादञ्च यक्ष्माणं पक्षाघातं हतेन्द्रियम्।
शूलाम्लपित्तकं हन्ति भास्करस्तिमिरं यथा।।
त्रिफलारसयोगेन शुभया सितयाऽपि वा।
भक्षयित्वा भवेद्रोगी कामरूपी सुदर्शनः।।
रात्रौ सेव्यं गवां क्षीरं कृशानाञ्च विशेषतः।
योगेन्द्राख्यो रसो नाम्ना कृष्णात्रेयविनिर्मितः।।

(B.R.Vatavyadhi, 21/160-166)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Rasa Sindura	–	1 Parts
Svarna Bhasma	–	½ Part
Lauha Bhasma	–	½ Part
Abhraka Bhasma	–	½ Part
Mukta Bhasma	–	½ Part
Vanga Bhasma	–	½ Part
Kumari Rasa	Lf.	Q.S. For Mardana

Procedure:

1. Collect all the ingridents of Yogendra Rasa.
2. Take Rasa sindura triturating properly by Khalva Yantra.
3. Add the rest of the ingredients and mix well to ensure uniform mixing.
4. Add an appropriate quantity of Kumari Rasa and continue triturate until it becomes suitable for making tablets or pills, then roll it into tablets or pills.
5. Shape the mixture into pills the size of 1- 2 Ratti.
6. Dry the pills in the shade and store it.

Dose: 125- 250 mg.

Anupana: Triphala Kvatha, Honey.

Indications: Bahumutra, Prameha, Vataroga, Apasmara, Pakshaghata, Bhagandara, Arsha, Vatapitta Roga, Mutraghata, Guda Roga, Murchchha, Unmada, Yakshma, Kshinendriya, Amlapitta.

PHARMACODYNAMICS

1. **Antioxidant and Immunomodulatory**: Yogendra Rasa contains potent metallic and herbal ingredients like Rasa Sindura, Svarna Bhasma, and Kumari Rasa, which possess antioxidant properties and help in boosting the immune system, thereby aiding in the management of various diseases.
2. **Anti-inflammatory**: The combination of Lauha Bhasma (iron calx) and Abhraka Bhasma (mica calx) provides anti-inflammatory effects, which are

beneficial in conditions like Vataroga (diseases due to vata imbalance) and Arsha (hemorrhoids).

3. **Hematopoietic**: The presence of Mukta Bhasma (pearl calx) and Vanga Bhasma (tin calx) helps in the formation of blood cells and improves hemoglobin levels, thereby addressing conditions like Anaemia associated with Prameha (urinary disorders).
4. **Nervine Tonic**: Kumari Rasa, derived from Aloe vera leaves, acts as a nervine tonic, promoting nerve health and aiding in the management of neurological disorders like Apasmara (epilepsy), Unmada (psychosis), and Pakshaghata (hemiplegia).

PHARMACOKINETICS

1. **Absorption**: The metallic and herbal components of Yogendra Rasa are likely absorbed in the gastrointestinal tract, with faster absorption facilitated by the liquid form of Kumari Rasa used for Mardana.
2. **Metabolism**: Upon absorption, the constituents undergo hepatic metabolism, where they may be metabolized into active metabolites or conjugated with glucuronides for elimination.
3. **Distribution**: The active compounds are distributed via the bloodstream to various target organs, including the liver, spleen, nervous system, and gastrointestinal tract, where they exert their pharmacological effects.
4. **Elimination**: Any unutilized constituents or metabolites are primarily eliminated through urine and feces. The duration of action and elimination half-life may vary based on individual factors and the specific metabolism of each ingredient.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Toxicological Studies of an Ayurvedic Medicine Yogendra Rasa used in Epilepsy	Mustari Hossain, Department of Pharmacy, Jahangirnagar University, Savar -1342, Dhaka, Bangladesh	Yogendra Rasa (YR), an Ayurvedic remedy for epilepsy, was chronically administered to Sprague-Dawley rats at 40mg/kg for 28 days to assess its toxicological characteristics. Throughout the study, YR-treated animals maintained negligible changes in overall body weight. However, significant decreases were observed in the absolute and relative weights of the male rat liver (25.50% and 23.53% decrease, respectively), kidney (18.90% and 16.69% decrease, respectively), and spleen (31.10% and 30.48% decrease, respectively). These findings indicate potential toxicity of YR on organ weights in rats.
2.	Role of Yogendra Rasa in Hridroga—A Critical Review	Dr. Anusha V.K., PG Scholar, Department of Rasashastra & Bhaishajya Kalpana, SDM College of Ayurveda, Udupi, Karnataka, India.	Yogendra Rasa, composed of Parada, Gandhaka, Svarna bhasma, Kantha loha bhasma, Mukta bhasma, Vanga bhasma, and Kumari svarasa, exhibits properties such as tridoshahara, ojovardhaka, and lekhana. These properties are believed to protect the heart from atherosclerosis and cardiac hypertrophy. This study aims to elucidate the role of Yogendra Rasa and its potential mode of action in heart diseases.

4.1.H Lakshmivilasa Rasa

Reference: A.F.I.-I, Rasayoga, 20:39, B.R. Rasayana

पलं कृष्णाभ्रचूर्णस्य तदर्द्धौ रसगन्धकौ।
तदर्द्ध चन्द्रसंज्ञस्य जातीकोषफले तथा।।
वृद्धदारकबीजञ्च बीजं धुस्तूरकस्य च।
त्रैलोक्यविजयाबीजं विदारीमूलमेव च।।
नारायणी तथा नागबला चातिबला तथा।
बीजं गोक्षुरकस्याऽपि नैचुलं बीजमेव च।।
एतेषां कार्षिकं चूर्णं पर्णपत्ररसैः पुनः।
निष्पिष्य वटिकाकार्या त्रिगुञ्जाफलमानतः।।
निहन्ति सन्निपातोत्थान् गदान् घोरान् चतुर्विधान्।
वातोत्थान् पैत्तिकांश्चैव नाऽस्त्यत्र नियमः क्वचित्।।
कुष्ठमष्टादशाख्यञ्च प्रमेहान् विंशतिं तथा।
नाडीव्रणं व्रणं घोरं गुदामयभगन्दरम्।।
श्लीपदं कफवातोत्थं रक्तमांसाश्रितञ्च यत्।
मेदोगतं धातुगदं चिरजं कुलसम्भवम्।।
गलशोथमन्त्रवृद्धिमतीसारं सुदारुणम्।
आमवातं सर्वरूपं जिह्वास्तम्भं गलग्रहम्।।
उदरं कर्णनासाक्षिमुखवैकृत्यमेव च।
कासपीनसयक्ष्मार्शः स्थौल्यदौर्गन्ध्यनाशनः।।
सर्वशूलं शिरःशूलं स्त्रीणां गदनिषूदनम्।
वटिकां प्रातरेकैकां खादेन्नित्यं यथाबलम्।।
अनुपानमिह प्रोक्तं मांसं पिष्टं पयो दधि।
वारिभक्तसुरासीधुसेवनात्कामरूपधृक्।।
वृद्धोऽपि तरुणस्पर्धी न च शुक्रस्य संक्षयः।
न च लिङ्गस्य शैथिल्यं न केशा यान्ति पक्वताम्।।
नित्यं स्त्रीणां शतं गच्छेन्मत्तवारणविक्रमः।
द्विलक्षयोजनी दृष्टिर्जायते पौष्टिकः परः।।
प्रोक्तः प्रयोगराजोऽयं नारदेन महात्मना।

रसो लक्ष्मीविलासस्तु वासुदेवे जगत्पतौ ।।
अभ्यासाद् यस्य भगवान् लक्ष्मनारीषु वल्लभः ।।

(B.R. Rasayana, 73/55-68)

Ingredients Used

Drug Name	Part Used	Proportion
Abhraka Bhasma	–	48 Gms
Shuddha Parada	–	24 Gms
Shuddha Gandhaka	–	24 Gms
Karpura	Sub. Ext.	12 Gms
Jatiphala	Ar.	12 Gms
Jatiphala	Sd.	12 Gms
Vriddhadaraka	Sd.	12 Gms
Dhattura	Sd.	12 Gms
Vijaya Bija	Sd.	12 Gms
Vadari Mula	Rt. Tr.	12 Gms
Shatavari	Rt. Tr.	12 Gms
Nagabala	Rt.	12 Gms
Atibala	Rt.	12 Gms
Gokshura	Fr.	12 Gms
Nichula- bija	Sd.	12 Gms
Nagavalli	Lf.	Q.S. For Mardana

Procedure:

1. Collect all the ingridents of Lakshmivilasa Rasa.
2. First, prepare Kajjali by triturating Shuddha Parada and Shuddha Gandhaka in a mortar (Khalva Yantra).
3. Add the rest of the ingredients and grind well to ensure uniform mixing.
4. Add an appropriate quantity of Nagavalli Patra Svarasa and until it becomes suitable for making tablets or pills, then roll it into tablets or pills.
5. Shape the mixture into pills the size of 250 mg.
6. Dry the pills in the shade.
7. Preserve the dried pills in a glass container.

Dose: 250 mg.

Anupana: Tambula Svarasa, Honey, Milk.

Indications: Udara, Prameha, Dhatu Kshaya, Urddhvanga Roga, Nadivrana, Kushtha, Vrana, Guda Roga, Bhagandara. All kind of Shlipada, Galashosha, Antra Vriddhi, Atisara, Amavata, Jihvastambha, Galagraha, Mukha-Karna-Nasa-Akshi Vikriti, Pinasa, Yakshma, Arsha, Sthaulya.

Pharmacodynamics

1. **Strengthening and Rejuvenating:** Lakshmivilasa Rasa is renowned for its rejuvenating properties, attributed to ingredients like Abhraka Bhasma (mica calx) and Shuddha Parada (purified mercury), which strengthen various bodily tissues (Dhatus) and promote overall health and vitality.
2. **Anti-inflammatory:** The presence of Shuddha Gandhaka (purified sulphur) and Karpura (camphor) imparts potent anti-inflammatory effects, beneficial in conditions like Udara Roga (abdominal disorders) and Nadivrana (sinus ulcers).
3. **Digestive Aid:** Herbs like Shatavari (Asparagus racemosus) and Nagavalli (Piper betle) included in this formulation aid digestion, relieve symptoms of Atisara (diarrhea), and improve appetite.
4. **Immunomodulatory:** The combination of Nicchula-bija (seeds of Ocimum basilicum) and Nagabala (Grewia populifolia) acts as an immunomodulator, enhancing the body's defense mechanisms against infections and promoting overall immunity.

Pharmacokinetics

1. **Absorption:** The powdered form of the ingredients allows for efficient absorption in the gastrointestinal tract, facilitated by the presence of digestive-enhancing herbs like Shatavari and Nagavalli.
2. **Metabolism:** Mercury-based ingredients like Shuddha Parada undergo metabolic transformation in the liver, where they may be converted into biologically active compounds or excreted in the bile.
3. **Distribution:** Active constituents are distributed throughout the body via the bloodstream, reaching target organs such as the abdomen, skin, mucous membranes, and joints, where they exert their therapeutic effects.
4. **Elimination:** Metabolites and unutilized compounds are primarily eliminated through urine and feces, with the duration of action and elimination half-life varying based on individual factors and the specific metabolism of each ingredient.

Research Updates

Sr.No.	Article Name	Author Name	Result
1.	Critical Review on Lakshmivilasa Rasa W.S.R. to Rasa Yoga Sagara	Dr. Vidya Chandrasekaran Thevar Post Graduate Scholar, Dept. of Rasashastra and Bhaishajya Kalpana, APM's Ayurved Mahavidyalaya, Sion, Mumbai, Maharashtra, India.	Lakshmivilasa Rasa, a versatile herbo-mineral combination, is employed in treating cough, fever, skin disorders, tuberculosis, diabetes, dysentery, and piles. This discussion highlights 12 variations of Lakshmivilasa Rasa from Rasa Yoga Sagara, detailing ingredients, trituration substances, vehicles, dietary guidelines, dosage, and indications for each formulation.

Sr.No.	Article Name	Author Name	Result
2.	Pharmaco-Therapeutic Profile of –An Ayurvedic Herbo-Mineral Formulation Lakshmivilasa Rasa	Bharat Rathi, Department of Rasashastra and Bhaishajya Kalpana, MGACH & RC, Salod (H), Wardha (MHA)	The study compiles modern research on Lakshmivilasa Rasa, showcasing its effectiveness in treating diverse ailments including respiratory, abdominal, anaemia, diabetes, tuberculosis, hepatitis, and infertility. With its unique ushna virya formulation, it's potent yet limited in pittaja vitiated conditions. This work sheds light on its therapeutic value, broad spectrum activity, and utility in managing khaphaja vataja disorders.

4.1.1 Vasantakusumakara Rasa

Reference: A.F.I.-I, Rasayoga, 20:42, R.Sa.Sa.Rasayana Vajikarana

द्विभागं हाटकं चन्द्रं त्रयो वङ्गाहिकान्तका:।
चतुर्भागं शुद्धमभ्रं प्रवालं मौक्तिकं तथा।।
भावयेद् गव्यदुग्धेन भावनेक्षुरसेन च।
वासालाक्षारसोदीच्यरम्भाकन्दप्रसूनकै:।।
शतपत्ररसेनैव मालत्या: कुङ्कुमोदकै:।
पश्चान्मृगमदैर्भाव्यं सुगन्धिरससंभवै:।।
कुसुमाकर विख्यातो वसन्तपदपूर्वक:।
गुञ्जाद्वयेन संसेव्य: सितामध्वाज्यसंयुत:।।
मेहघ्न: कान्तिदश्चैव कामद: पुष्टिदस्तथा।
वलीपलितहश्चैव स्मृतिभ्रंशं विनाशयेत्।।
तुष्टिदो बल्यमायुष्य: पुत्रप्रसवकारक:।
प्रमेहान् विंशतिञ्चैव क्षयमेकादशं तथा।
तथा सोमरुजं हन्ति साध्यासाध्यमथापि वा।।

(R.Sa.Sa.Rasayana, 5/82-88)

Ingredients Used

Drug Name	Part Used	Proportion
Svarna Bhasma	–	2 Parts
Rajata Bhasma	–	2 Parts
Vanga Bhasma	–	3 Parts
Naga Bhasma	–	3 Parts
Lauha Bhasma	–	3 Parts
Abhraka Bhasma	–	4 Parts
Pravala Bhasma	–	4 Parts
Mukta Bhasma	–	4 Parts
Go-Dugdha	–	Q. S. For Mardana
Ikshu	St.	Q. S. For Mardana
Vasa	Lf.	Q. S. For Mardana
Laksha	Gl.	Q. S. For Mardana
Udichya	Rt.	Q. S. For Mardana
Rambha Kanda	Rt. Tr.	Q. S. For Mardana
Shata Patra	Fl.	Q. S. For Mardana
Jati	Fl.	Q. S. For Mardana
Mrigamada	–	Q. S. For Mardana

Procedure:

1. Collect all the ingredients for Vasanta-kusumakara Rasa.
2. Triturate each ingredient individually using a Khalva Yantra and mix well.
3. Add an appropriate quantity of cow's milk (Go-Dugdha) and perform bhavana (wet grinding) for one day until the mixture becomes dry.
4. The next day, use Ikshu Rasa for the bhavana process.
5. Repeat the bhavana process with the remaining liquid ingredients (dravadravya).
6. Shape the mixture into pills of 1-2 Ratti size.
7. Dry the pills in the shade and store them.

Dose: 125 – 250 mg.

Anupana: Honey, Goghrita, Milk, Sita.

Indications: Meha, Vali Palita, Smriti Bhramsa, Kshaya, Somaroga, Karshya.

Pharmacodynamics

1. **Rejuvenating and Aphrodisiac:** Vasantakusumakara Rasa is a potent Rasayana formulation known for its rejuvenating properties. It acts as an aphrodisiac, enhancing vitality, vigor, and sexual potency. Ingredients like Svarna Bhasma (gold calx) and Mukta Bhasma (pearl calx) contribute to these effects.
2. **Antidiabetic:** The formulation is beneficial in managing Meha (diabetes mellitus), helping to regulate blood sugar levels. This effect is attributed to the combination of various metallic and herbal ingredients that aid in maintaining glucose homeostasis.
3. **Memory Enhancer:** Vasanta kusumakara Rasa has been traditionally used to improve memory and cognitive functions. It contains herbs like Jati (Jasminum sambac) and Shata Patra (Nelumbo nucifera), which possess neuroprotective properties and enhance cognitive performance.
4. **Anti-aging:** Regular use of this formulation is believed to retard the aging process, promoting longevity and overall well-being. The presence of Svarna Bhasma and Pravala Bhasma, along with other ingredients, helps in maintaining youthful vigor and vitality.

Pharmacokinetics

1. **Absorption**: The powdered form of the ingredients allows for efficient absorption in the gastrointestinal tract, facilitated by the presence of digestive-enhancing herbs like Vasa (Adhatoda vasica) and Laksha (Laccifer lacca).
2. **Metabolism**: Metallic ingredients like Svarna Bhasma and Rajata Bhasma undergo metabolic transformation in the liver, where they may be converted into biologically active compounds or excreted in the bile.
3. **Distribution**: Active constituents are distributed throughout the body via the bloodstream, reaching target organs such as the reproductive system, nervous system, and endocrine glands, where they exert their therapeutic effects.
4. **Elimination**: Metabolites and unutilized compounds are primarily eliminated through urine and feces, with the duration of action and elimination half-life varying based on individual factors and the specific metabolism of each ingredient.

Research Updates

Sr.No.	Article Name	Author Name	Result
1.	Vasanta Kusmakara Rasa, An Ayurvedic Herbo-Mineral Formulation Prevents The Development of Diabetic Retinopathy in Rats	Sanjay Motilal Tamoli, R. A. Podar Ayurved Medical College, Dr. Annie Besant Road, Worli, Mumbai, Maharashtra-400018, India	Vasanta Kusumakara Rasa treatment restored serum lipid profile and ameliorated oxidative stress in diabetic rats. It decreased lipid peroxidation, boosted endogenous antioxidants, and reduced levels of aldose reductase and vascular endothelial growth factor in eye tissue. Additionally, it restored the normal architecture of retinal tissue, suggesting protective effects against diabetic retinopathy through multiple biochemical pathways.
2.	A Critical Interpetation on the Safety and Toxicity Standards of Vasanta Kusumakara Rasa	Dr. Parul Rani, Reader & HOD, Department of Rasashastra & Bhaishajya Kalpana, Dhanvantari Ayurvedic Medical College & Hospital, Bareilly, U.P.	Vasanta Kusumakara Rasa effectively treats diabetes and related conditions like malnutrition and sluggishness. However, herbal medicines, including Vasanta Kusumakara Rasa, may contain harmful heavy metals, risking health if levels exceed safe limits. Education for consumers and producers is crucial to mitigate this risk. Following Rasa Shastra principles ensures proper processing of heavy metals. Furthermore, monitoring and discouraging self-medication without prescriptions are essential.
3.	Clinical Efficacy of Vasantakusumakara Rasa with Phalatrikadi Kvatha in Mangement of Prameha (Diabetes Mellites)—A Case Study	Jitendra Varsakiy, Assistant Professor, Department of Kayachikitsa, Chaudhary Brahma Prakash Ayurved Charak Samsthan, Najafgarh, Khera Dabar, New Delhi - 110073.	A 64-year-old male presented with symptoms of diabetes mellitus. He was treated with Vasanta Kusumakara Rasa alongside Phalatrikadi Kvatha, dietary recommendations, and Yogasanas. Ayurvedic treatment effectively managed Prameha (diabetes).

4.1.3 Vasantamalati Rasa

Reference: A.F.I.-I, Rasayoga, 20:41, Si.Bhai.Ma.Ma.Jvara.

स्वर्णं मुक्ता च दरदं मरिचं भागवृद्धित:।
खर्पराष्टौ कलांशं स्यान्नवनीतं पयोभवम्।।
निम्बूकैर्मर्दयेत्तावद्यावत् स्नेहो लयं व्रजेत्।
मालती प्राग्वसन्तोऽयं रसो धातुज्वरं जयेत्।।
मात्रा गुञ्जाद्वयोन्माना कणा मधु चमत्कृता।
प्रकुञ्चपञ्चके पञ्चनवतिनिम्बुकान्यलम्।।

(Si.Bhai.Ma.Ma.Jvara, 4/60-62)

Ingredients Used

Drug Name	Part Used	Proportion
Suvarna Bhasma	–	1 Part
Mukta Bhasma	–	2 Parts
Shuddha Hingula	–	3 Parts
Maricha	Fr.	4 Parts
Kharpara Bhasma	–	8 Parts
Navanita	–	18/16 parts
Nimbuka Svarasa	Fr.	Q.S. For Mardana

Procedure:

1. Collect all the ingredients for Vasantamalati Rasa.
2. Triturate each ingredient individually using a Khalva Yantra and mix well.
3. Add 18/16th part of navanita and triturate properly.
4. Add an appropriate quantity of Nimbuka Svarasa, until the mixture has lost its greasiness.
5. Shape the mixture into pills of 1-2 Ratti size.
6. Dry the pills in the shade and store them.

Dose: 125-250 mg.

Anupana: Pippali Churna, Honey.

Indications: Jirna Kasa, Jirna Jvara.

PHARMACODYNAMICS

1. **Antipyretic**: Vasantamalati Rasa is primarily indicated for its antipyretic properties, effectively reducing fever. The combination of ingredients like Suvarna Bhasma (gold calx) and Maricha (black pepper) helps in lowering body temperature by acting on the hypothalamus, the body's temperature-regulating center.
2. **Analgesic**: The formulation possesses analgesic properties, providing relief from pain associated with fever and respiratory conditions. Mukta Bhasma (pearl calx) and Hingula (cinnabar) contribute to these analgesic effects.
3. **Antitussive**: Vasantamalti Rasa helps alleviate cough symptoms by suppressing cough reflexes. Marica, known for its bronchodilatory and expectorant properties, aids in clearing respiratory passages and reducing cough severity.

PHARMACOKINETICS

1. **Absorption**: The powdered form of the ingredients allows for efficient absorption in the gastrointestinal tract, with enhanced bioavailability. This facilitates rapid onset of action, making it effective in reducing fever and associated symptoms.
2. **Metabolism**: Metallic ingredients like Suvarna Bhasma undergo metabolic transformation in the liver, where they may be converted into biologically active compounds or excreted in the bile. Mukta Bhasma and Hingula may also undergo metabolic processes to exert their therapeutic effects.
3. **Distribution**: Active constituents are distributed throughout the body via the bloodstream, reaching target organs such as the brain, respiratory system, and immune system, where they exert their pharmacological actions.
4. **Elimination**: Metabolites and unutilized compounds are primarily eliminated through urine and feces, with the duration of action and elimination half-life varying based on individual factors and the specific metabolism of each ingredient.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Critical Review of Vasanta Malati Rasa—A Herbomineral Product	Manisha B. Walunj, Ph.D. Scholar, Department of Rasashastra and Bhaishajya Kalpana, I. P. G. T. & R.A., Gujarat Ayurved University, Jamnagar, Gujarat, India	The study aims to compile references of Vasanta Malati Rasa from various Rasa texts and compare them based on composition, preparation method, dose, indications, and contributions of each text. Eight formulations were identified, with Svarna Vasanta Malati Rasa and Laghu Malini Vasanta Rasa being the most cited. Both formulations contain Rasaka and Maricha as chief ingredients, known for their rejuvenating effects. Despite variations in descriptions, both are classified as Kharaliya Rasayana, indicating similarities in preparation method.
2.	Role of Vasanta Malati Rasa—As An Immunomodulator – A Review	Dr. Shabeen Ali, Final Year P.G. Scholar, Dept. of Rasa Shastra and Bhaishajya Kalpana, N.K. Jabshetty Ayurvedic Medical College & P.G. Centre, Bidar, Karnataka, India.	Vasanta Malati Rasa, a Herbomineral formulation, acts as a Kharaliya Rasayana. It promotes enzyme and hormone synthesis, tissue replacement, and immune health. With ingredients like Svarna, Mukta, Shu. Hingula, Maricha, and Shuddha Kharpara, it offers targeted action and enhanced therapeutic efficacy with minimal toxicity.

4.1.K Brihat Vata Chintamani Rasa

Reference: A.F.I.-I, Rasayoga, 20:26, B.R., Vata-vyadhi

भागत्रयं स्वर्णभस्म द्विभागं रौप्यमभ्रकम्।
लोहात्पञ्च प्रवालञ्च मौक्तिकं त्रयसम्मितम्।।
भस्मसूतं सप्तकञ्च कन्यारस विमर्दितम्।
वल्लमात्रा वटी कार्या भिषग्भिः परियत्नतः।।
यथाव्याध्यनुपानेन नाशयेद्रोगसंकुलम्।
वातरोगं पित्तकृतं निहन्ति नात्र चिन्तनम्।।
वृद्धोऽपि तरुणस्पर्द्धी कन्दर्पसमविक्रमः।
दृष्टः सिद्धफलश्चायं वातचिन्तामणिस्त्विह।।

(B.R., Vatavyadhiroga., 26/145-148)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Svarna Bhasma	–	3 Parts
Rajata Bhasma	–	2 Parts
Abhraka Bhasma	–	2 Parts
Lauha Bhasma	–	5 Parts
Pravala Bhasma	–	3 Parts
Mautika Bhasma	–	3 Parts
Rasa Sindura	–	7 Parts
Kumari Rasa	Lf.	Q.S. For Mardana (1 Day)

Procedure:

1. Take all the required dried ingredients for Brihat Vata Chintamani Rasa. Ensure each ingredient is clean and free from impurities.
2. Using a Khalva Yantra (traditional mortar and pestle) and mix thoroughly to ensure a uniform blend of all ingredients.
3. Adding Kumari rasa and triturate well, until it becomes suitable for making tablets or pills, then roll it into tablets or pills.
4. Expose the tray to sunlight or under hot air oven for several hours to days until the material is completely dry. Brihat Vata Chintamani Rasa.
5. Store the Brihat Vata Chintamani Rasa in a clean, dry, airtight container to preserve its potency.

Dose: 125 mg.

Anupana: Guduchi Svarasa, Aja Kshira, Brahmi Svarasa, Tambula Svarasa, Shankhapushpi Svarasa, Honey.

Indications: Vata Pittaja Roga, Bhrama, Pralapa.

PHARMACODYNAMICS

1. **Nervine Tonic:** Brihat Vata Chintamani Rasa acts as a potent nervine tonic, rejuvenating the nervous system and promoting overall neurological health Ingredients like Svarna Bhasma (gold calx) and Rajata Bhasma (silver calx) possess neuroprotective properties, helping in the management of various neurological disorders.
2. **Anti-inflammatory:** The formulation exhibits significant anti-inflammatory effects, reducing inflammation associated with Vata and Pitta disorders Abhraka Bhasma (mica calx) and Pravala Bhasma (coral calx) contribute to these anti-inflammatory properties, providing relief from pain and swelling.
3. **Antioxidant:** Brihat Vata Chintamani Rasa contains potent antioxidants such as Lauha Bhasma (iron calx) and Mautika Bhasma (pearl calx), which help in neutralizing free radicals and oxidative stress. This antioxidant activity protects cells and tissues from damage and supports overall health and vitality.

PHARMACOKINETICS

1. **Absorption:** The powdered form of the ingredients allows for efficient absorption in the gastrointestinal tract, facilitating rapid onset of action. This ensures timely relief from symptoms associated with Vata and Pitta disorders.
2. **Metabolism:** Metallic ingredients like Svarna Bhasma and Rajata Bhasma undergo metabolic transformation in the liver, where they may be converted into biologically active compounds or excreted in the bile. Other ingredients may also undergo metabolic processes to exert their therapeutic effects.
3. **Distribution:** Active constituents are distributed throughout the body via the bloodstream, reaching target organs such as the nervous system, liver, and joints, where they exert their pharmacological actions.
4. **Elimination:** Metabolites and unutilized compounds are primarily eliminated through urine and feces, with the duration of action and elimination half-life varying based on individual factors and the specific metabolism of each ingredient.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Evaluation of Neuro-Protective Activity of Brihatvata Chinthamani Rasa	Vikram Goshan,	The study evaluated Brihatvata Chinthamani Rasa's neuroprotective effects in stroke-induced rats. Treatment led to reduced lipid peroxidation, increased catalase levels, and preserved brain tissue integrity compared to controls, highlighting its antioxidant properties and ability to maintain normal brain structure.
2.	A Review on Brihata Vatachintamani Rasa	Dr. Swati B. Chavan, PG Scholar, Department of Rasashastra and Bhaishjya Kalpana, Govt. Ayurvedic College, Osmanabad, MHA	Suvarnakalpa, akin to the mythical 'Chintamani', offers comprehensive care, particularly in vatavikara and hrudroga. It demonstrates notable vatashamaka, rasayana, balya, and hridaya samrakshaka properties, making it effective in cardiovascular conditions such as irregular pulse, heart rate, anginal pain, and weakened heart muscle-related circulation issues.
3.	Assessment of The Efficacy of Brihat Vata Chintamani Rasa and Gaganadi Vati with Gandhaprasarini Taila in the Management of Pakshaghata with Special Reference to Hemiplegia Comparative Clinical Study".	Dr. G.Vinay Mohan, Professor & HOD, Department of Kayachikitsa, Shri Shivayogeeshwar Rural Ayurvedic Medical College & Hospital, Inchal, Belagavi, Karnataka, India.	In this clinical study, 40 subjects were split into two groups. Group A received Brihat Vata Chintamani Rasa internally and Gandha Prasarini Taila externally for 28 days, while Group B received Gaganadi Vati internally and Gandha Prasarini Taila externally for the same duration. Treatment with Brihat Vata Chintamani Rasa yielded better results compared to Gaganadi Vati in combination with Gandha Prasarini Taila.

4.1.L Shankha Vati

Reference: A.F.I.-I, Vati Gutika, 12:32, B.R. Agnimandya

चिञ्चाक्षारपलं पटुव्रजपलं निष्पूरसे कल्कितम्।
तस्मिन् शङ्खपलं प्रतप्तमसकृत् संस्थाप्य शीर्णांवधि।।
हिङ्ग्वोषपलं रसामृतवलीन् निक्षिप्य निष्कांशिकान्।
यद्भवा शङ्खवटी क्षयग्रहणिकारुक्पक्तिशूलादिषु।।

(B.R. Agnimandya, 10/187)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Chincha Kshara	St. Bk.	48 gms
Pancha Lavana	–	48 gms
Nimbu Svarasa	Fr.	Q.S. For Mardana
Shankha Bhasma	–	48 gms
Hingu	Exd.	48 gms
Shunthi	Rz.	48 gms
Maricha	Fr.	48 gms
Pippali	Fr.	48 gms
Shuddha Parada	–	3 gms
Shuddha Vatsanabha	Rt.Tr.	3 gms
Shuddha Gandhaka	–	3 gms

Procedure:

1. Collect all the ingridents of Shankha Vati.
2. First, prepare Kajjali by triturating Shuddha Parada and Suddha Gandhaka in a mortar (Khalva Yantra).
3. Add the rest of the ingredients and grind well to ensure uniform mixing.
4. Add an appropriate quantity of Nimbu Svarasa and until it becomes suitable for making tablets or pills, then roll it into tablets or pills.
5. Shape the mixture into pills the size of 250 mg- 500 mg.
6. Dry the pills in the shade.
7. Preserve the dried pills in a glass container.

Dose: 250- 500 mg.

Anupana: Honey, Warma Water, Butter- milk.

Indications: Agnimandya, Grahni, Arochaka, Paktishula, Kshaya.

PHARMACODYNAMICS

1. **Chincha Kshara:** Acts as an alkaline agent, neutralizing stomach acids and aiding in digestion.
2. **Pancha Lavana (Five Salts):** Includes Saindhava, Samudra, Vida, Sauvarchala, and Romaka salts which enhance digestion, stimulate appetite, and improve metabolism.
3. **Nimbu Svarasa:** Rich in vitamin C and antioxidants, it helps in detoxification and enhances the digestive process.
4. **Shankha Bhasma:** Provides calcium and other minerals, acting as an antacid and digestive tonic.
5. **Hingu:** Has carminative, digestive, and antispasmodic properties.
6. **Shunthi:** Possesses anti-inflammatory, carminative, and digestive properties, enhancing gastrointestinal motility.
7. **Maricha:** Improves digestion, increases bioavailability of other ingredients, and has carminative properties.
8. **Pippali:** Stimulates digestion and metabolism, also enhances the absorption of other ingredients.
9. **Shuddha Parada:** Used in a minute quantity, it is believed to balance doshas and improve overall efficacy.
10. **Shuddha Vatsanabha:** Used in very small amounts, it acts as a stimulant and digestive aid.
11. **Shuddha Gandhaka:** Enhances metabolism and has detoxifying properties.

PHARMACOKINETICS

1. **Absorption:** The bioavailability of the active components is enhanced by ingredients like Pippali and Maricha. The presence of acidic medium (Nimbu Svarasa) may aid in the absorption of alkaline substances like Shankha Bhasma.
2. **Distribution:** The minerals and active compounds are likely distributed through the bloodstream to the target sites, particularly the gastrointestinal tract.
3. **Metabolism:** Ingredients like Shunthi, Hingu, and Pippali are metabolized in the liver, where they undergo biotransformation to active metabolites. Purified mercury and sulphur undergo specific Ayurvedic processes ensuring they are metabolized safely.
4. **Excretion:** The waste products of these ingredients are excreted through the kidneys (urine) and the intestines (feces). The presence of detoxifying agents like Nimbu Svarasa ensures that any residual substances are efficiently eliminated from the body.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Shankha Vati—A Classical Review	Bishnupriya Mohanty, MD (Samhita), Ph.D. (Basic Principle) Professor & Head of the Department of Sanskrit Samhita and Siddhanta.	Shankha Vati, a classical Ayurvedic formulation, addresses conditions like hyperacidity, abdominal pain, ulcers, and constipation. Through extensive research, various formulations were compiled, with common ingredients including Shankha Bhasma, Hingu, Vatsanabha, Trikatu, Kshara, and Lavana.
2.	Varieties in Shankha Vati —An Ayurvedic Classical Formulation for GIT Disorders	Naveena Kodlady, Dept. of Rasashastra and Bhaishajya Kalpana including Drug Research, IPGT&RA, Gujarat Ayurved University, Jamnagar - 361008, Gujarat, India	This article presents a comprehensive literary search across various Ayurvedic texts, compiling 15 varieties of Shankha Vati along with their ingredients, proportions, and attributes. Common ingredients found in most varieties include Shankha Bhasma, Hingu, Vatsanabha, Trikatu, Kshara, and Lavana.

4.1.M Shvasakuthara Rasa

Reference: A.F.I.-I, Rasayoga, 20:49, Yo.Ra., Shvasa.

रसो गन्धो विषं चैव टङ्कणं च मनःशिला।
एतानि टङ्कमात्राणि मरिचं चाष्टटङ्कम्।।
एकैकं मरिचं दत्त्वा खल्वे सूक्ष्मं विमर्दयेत्।
त्रिकटु टङ्कमात्रं च दत्त्वा पश्चाद्विचूर्णयेत्।।
सर्वमेकत्र संयोज्य काचकूप्यां विनिक्षिपेत्।
कासे श्वासे च मन्दाग्नौ वातश्लेष्मामयेषु च।।
गुञ्जामात्रं प्रदातव्यं पर्णखण्डेन धीमता।
सन्निपाते च मूर्च्छायामपस्मारे तथा पुनः।।
अतिमोहत्वमापन्ने नस्यं दत्त्वा विचक्षणः।
रसः श्वासकुठारोऽयं सर्वश्वासविकारहा।।

(Yo.Ra., Shvasa, p. 373/1-4)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Shuddha Rasa	–	4 gms
Shuddha Gandhaka	–	4 gms
Shuddha Vatsanabha	Rt. Tr.	4 gms
Shuddha Tankana	–	4 gms
Shuddha Manahshila	–	4 gms
Maricha	Fr.	36 gms
Shunthi	Rz.	4 gms
Pippali	Fr.	4 gms

Procedure:

1. Collect all the ingridents of Shvasakuthara Rasa.
2. First, prepare Kajjali by triturating Shuddha Parada and Shuddha Gandhaka in a mortar (Khalva Yantra).
3. Add the rest of the ingredients and grind well to ensure uniform mixing.
4. Expose the tray to sunlight or under hot air oven.
5. Once fully dried, collect the dried material. This final product is called Shvasakuthara Rasa.
6. Store the Shvasakuthara Rasa in a clean, dry, airtight container to preserve its potency.

Dose: 125- 250 mg.

Anupana: Honey.

Indications: Agnimandya, Kasa, Shvasa, Vata Kaphaja Roga, Sannipata Roga, Murchchha, Apasmara, Meha.

PHARMACODYNAMICS

1. **Shuddha Rasa**: Acts as a potent antimicrobial and detoxifying agent. It helps in balancing the three doshas (Vata, Pitta, Kapha) and enhances the overall efficacy of the formulation.
2. **Shuddha Gandhaka**: Known for its detoxifying and rejuvenating properties, it helps in improving metabolism and acts as a potent anti-inflammatory agent.
3. **Shuddha Vatsanabha**: Used in very small amounts, it acts as a stimulant, aiding in respiratory function and reducing inflammation.
4. **Shuddha Tankana**: Helps in liquefying mucus, easing respiratory conditions like cough (Kasa) and asthma (Shvasa).
5. **Shuddha Manahshila**: Known for its respiratory benefits, it helps in easing breathing difficulties and reducing phlegm.
6. **Maricha**: Enhances the bioavailability of other ingredients, stimulates digestion, and acts as a carminative.
7. **Shunthi**: Has anti-inflammatory, carminative, and digestive properties, aiding in reducing respiratory and digestive issues.
8. **Pippali**: Stimulates digestion and respiratory functions, enhances metabolism, and increases the absorption of nutrients.

PHARMACOKINETICS

1. **Absorption**: The ingredients are likely absorbed efficiently due to the presence of bioavailability enhancers like Maricha and Pippali. The acidic medium (if combined with honey) can also aid in the absorption of certain components.

2. **Distribution**: The active compounds are distributed via the bloodstream to the target tissues, especially the respiratory and digestive systems. Mercury and sulphur are expected to disperse to tissues where they exert their detoxifying effects.
3. **Metabolism**: Ingredients like Shunthi, Marica, and Pippali are metabolized in the liver. Mercury and sulphur, after Ayurvedic purification, are metabolized safely in the body, ensuring they provide therapeutic benefits without toxicity.
4. **Excretion**: The metabolites of the ingredients are excreted primarily through the kidneys (urine) and the intestines (feces). The detoxifying agents ensure that any residual substances are efficiently eliminated from the body.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Critical Review of Shvasakuthara Rasa–A Herbomineral Formulation Review Article	Bhagyalakshmi, Institute of Post Graduate Teaching & Research In Ayurveda	Shvasakuthara Rasa, known by various names, maintains consistent ingredients across formulations, with variations in Maricha, Pippali, and Shunthi quantities. First mentioned in the 15th century AD, it is commonly referred to as Shvasakuthara Rasa in texts, characterized by Maricha as a chief ingredient in many references.
2.	Component of Shvaskuthara Rasa and their Mode of Action in Shvasa Roga	Dr. Kavita Saini, Assistant Professor, Prakash Institute of Ayurvedic Medical Science & Research, Noida (U.P.)	The study aimed to explore the therapeutic potential of Shvasakuthara Rasa based on Ayurvedic principles and contemporary assessment parameters. All ingredients of Shvasakuthara Rasa possess Ushna Virya (hot potency) and Vata-Kaphahara properties, targeting the main Dosha involved in Shvasa (Asthma). Recognized in Ayurveda for its efficacy in asthma treatment, Shvasakuthara Rasa acts on Shvasa Roga by directly impacting the Pranavaha Srotas.
3.	A Systematic Review on Therapeutic Potential of Shvasakuthara Rasa	Paymalle L, Ph.D. Scholar, Dept of Agadatantra, Mahatma Gandhi Ayurved College Hospital and Research Centre, Salod [Hirapur], MHA, India	A review of Shvasakuthara Rasa's clinical effects across various diseases found it safe and effective, either alone or as an adjunct therapy. However, evidence is limited, with only seven small-scale studies available. Larger trials comparing it with standard treatments in different asthma severity levels are recommended to establish its clinical potential fully, particularly in emergency asthma management.

4.1.N Kamadudha Rasa

Reference: A.F.I.-II, Rasayoga, 16:9, R.Ta.Sa.Kharaliya Rasayana

मौक्तिस्य प्रवालस्य मुक्ताशुक्तिभवस्य च।
वराटिकायाः शङ्खस्य भस्मानि गैरिकं तथा।।
गुडूचिकोद्भवं सत्त्वं समभागानि कारयेत्।
अजाजिकासिताभ्याञ्च गृह्णीयादुक्तिकाद्वयम्।।
जीर्णज्वरभ्रमोन्मादपित्तरोगेषु शस्यते।
अम्लपित्ते सोमरोगे योज्यः कामदुधारसः।।

(Rasayogasagara, 157, Ist Part, p. 260; Aushadhaguna Dharma Shastra, 20)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Mukta Pishti	–	1 Part
Pravala Pishti	–	1 Part
Sukti Bhasma	–	1 Part
Kapardika Bhasma	–	1 Part
Shankha Bhasma	–	1 Part
Shuddha Svarnagairika	–	1 Part
Guduchi Svarasa	St.	1 Part

Procedure:

1. Take all the required dried ingredients for Kamadudha Rasa. Ensure each ingredient is clean and free from impurities.
2. Using a Khalva Yantra (traditional mortar and pestle), Mix thoroughly to ensure a uniform blend of all ingredients.
3. Adding Guduchi Svarasa and triturate well, until it becomes suitable for making tablets or pills, then roll it into tablets or pills.
4. Expose the tray to sunlight or under hot air oven for several hours to days until the material is completely dry.
5. Once fully dried, collect the dried material. This final product is called Kamadudha Rasa.
6. Store the Kamadudha Rasa in a clean, dry, airtight container to preserve its potency and freshness.

Dose: 125- 250 mg.

Anupana: Sita, Jiraka, Amalaki Churna, Ghrita.

Indications: Pittavikara, Amalapitta, Daha, Murchchha, Bhrama, Somaroga, Pradara, Raktapitta.

PHARMACODYNAMICS

1. **Mukta Pishti**: Known for its cooling properties, it helps in balancing Pitta dosha, reducing acidity, and providing relief from burning sensations (Daha) and dizziness (Bhrama).
2. **Pravala Pishti**: Acts as an antacid, helps in reducing hyperacidity (Amlapitta), and has anti-inflammatory properties.
3. **Sukti Bhasma**: Provides calcium, acts as an antacid, and helps in reducing gastric discomfort and hyperacidity.
4. **Kapardika Bhasma**: Known for its digestive benefits, it helps in neutralizing stomach acids and treating Pitta disorders.
5. **Shankha Bhasma**: Acts as a potent antacid and digestive aid, providing relief from acid reflux and balancing Pitta dosha.
6. **Shuddha Svarnagairika**: Used in small quantities, it is believed to have balancing properties for all three doshas and enhances the overall efficacy of the formulation.
7. **Guduchi Svarasa**: Known for its adaptogenic and immunomodulatory properties, it helps in detoxification, balancing Pitta dosha, and improving overall health.

PHARMACOKINETICS

1. **Absorption**: The bioavailability of calcium and other minerals is enhanced by the fine particulate nature of Pishti and Bhasma preparations. The presence of Guduchi Svarasa aids in the absorption of these minerals.
2. **Distribution**: The active components are distributed through the bloodstream to the target tissues, particularly the digestive system and areas affected by Pitta imbalance.
3. **Metabolism**: The ingredients undergo biotransformation in the liver. Minerals like calcium are metabolized and utilized in the body, while Guduchi helps in enhancing the metabolic processes.
4. **Excretion**: The waste products of these ingredients are excreted through the kidneys (urine) and the intestines (feces). The detoxifying agents ensure efficient elimination of residual substances from the body.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Pharmaceutico-Analytical Study of Kamdudha Rasa — An Ayurveda Formulation	Pranjali Langade, PG Scholar, Rasashastra & Bhaishajya Kalpana, Department, Mahatma Gandhi Ayurved College, Hospital & Research Centre, Wardha, Maharashtra, India.	The pharmaceutical process included Guduchi Sattva preparation, Amalaki Svarasa extraction, Shodhana of Svarna Gairika, Bhavana with Amalaki Svarasa, and addition of Shodhita and Bhavita SG and Guduchi Sattva with Mishri. Kamadudha Rasa met specifications with 0.01% w/w loss on drying, 37.5% w/w water soluble extractive, 5.5% w/w alcohol soluble extractive, and pH 5.14. Bhavana enhanced product quality and therapeutic efficacy. Storage in dry, sterile, airtight containers is recommended due to its hygroscopic nature.
2.	A Review Study of The Role of Kamadudha Rasa In Mahastrotasa Vyadhi	Dr. Vasavi Totawar (Madurwar), P.G. Scholar Dept. of Rasashastra and Bhaishajyakalpana, Bhausaheb Mulak Ayurved Mahavidyalaya, Nagpur, MHA.	Kamadudha Rasa is commonly used in Pittaja Vyadhi. It comprises Shudha varga dravyas like Pravala, Mukta, Muktashukti, Shankha, and Kapardika, known for their cooling and Pitta-reducing properties. It also contains Suvarna Gairika, which has blood-coagulating and calming effects. Kamadudha Rasa has effects on the digestive, cardiovascular, nervous, and urinary systems. It cools the body, regulates stomach acid, reduces inflammation in the digestive organs, and mitigates bleeding tendencies.
3.	Kamadugha Rasa — An Effective Ayurvedic Formulation for Amla Pitta (Hyperacidity/ Acid Peptic Disorder)— A Review	Himani Purohit, PG Scholar, Sriganganagar College of Ayurvedic Science & Hospital, Tantia University, Sriganganagar, Rajasthan, India	Natural alternative therapies like Kamadugha Rasa are increasingly favored for treating Peptic Ulcer Disease due to their perceived efficacy and lower risk of side effects compared to allopathic drugs. Further research is needed to understand Kamadugha Rasa's mechanism of action fully.

4.1.o Sutashekhara Rasa

Reference: A.F.I.-II, Rasayoga, 16:63, Yo.Ra. Amlapita

शुद्धं सूतं मृतं स्वर्णं टङ्कणं वत्सनागकम्।
व्योषमुन्मत्तबीजं च गन्धकं ताम्रभस्मकम्।।
चतुर्जातं शङ्खभस्म बिल्वमज्जा कचोरकम्।
सर्वं समं क्षिपेत्खल्वे मर्द्यं भृङ्गरसैर्दिनम्।।
गुञ्जामात्रां वटीं कृत्वा द्विगुञ्जे मधुसर्पिषी।
भक्षयेदम्लपित्तघ्नो वान्तिशूलामयापहः।।

पञ्च गुल्मान्यञ्च कासान्ग्रहण्यामयनाशनः।
त्रिदोषोत्थातिसारघ्नः श्वासमन्दाग्निनाशनः।।
उग्रहिक्कामुदावर्तं देहयाप्यगदापहः।
मण्डलान्नात्र सन्देहः सर्वरोगहरः परः।
राजयक्ष्महरः साक्षादसोऽयं सूतशेखरः।।

(Yo.Ra. Amlapita, p. 125/1-5)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Shuddha Parada	–	1 Part
Svarna Bhasma	–	1 Part
Shuddha Tankana	–	1 Part
Shuddha Vatsanabha	Rt. Tr.	1 Part
Shunthi	Rz.	1 Part
Maricha	Fr.	1 Part
Pippali	Fr.	1 Part
Shuddha Dhattura	Sd.	1 Part
Shuddha Gandhaka	–	1 Part
Tamra Bhasma	–	1 Part
Ela	Sd.	1 Part
Tvaka	St. Bk.	1 Part
Patra	Lf.	1 Part
Nagakesara	Stmn.	1 Part
Shankha Bhasma	–	1 Part
Bilva Majja	Fr. P.	1 Part
Karchura	Rz.	1 Part
Bhringaraja Rasa	Pl.	Q.S. For Mardana

Procedure:

1. Collect all the ingridents of Sutashekhara Rasa.
2. First, prepare Pishti by triturating Shuddha Parada and Svarna Bhasma in a mortar (Khalva Yantra).
3. Add the rest of the ingredients and grind well to ensure uniform mixing.
4. Add an appropriate quantity of Bhringaraja Svarasa and until it becomes suitable for making tablets or pills, then roll it into tablets or pills.
5. Shape the mixture into pills the size of 125 mg- 250 mg.
6. Dry the pills in the shade.
7. Preserve the dried pills in a glass container.

Dose: 125- 250 mg.

Anupana: Ghee, Honey.

Indications: Amlapitta, Chhardi, Gulma, Kasa, Grahani, Tridoshaja Atisara, Shula, Shvasa, Mandagni, Hikka, Udavarta, Rajayakshma.

PHARMACODYNAMICS

1. **Shuddha Parada:** Acts as a potent antimicrobial and detoxifying agent. It balances all three doshas (Vata, Pitta, Kapha) and enhances the overall efficacy of the formulation.
2. **Svarna Bhasma:** Known for its rejuvenating and immunomodulatory properties. It helps in improving strength, vitality, and balances doshas.
3. **Shuddha Tankana:** Assists in liquefying mucus, easing respiratory conditions, and balancing Pitta dosha.
4. **Shuddha Vatsanabha:** Used in very small amounts, it acts as a stimulant, aiding in digestive and respiratory functions.
5. **Shunthi, Maricha, and Pippali:** Stimulate digestion, improve metabolism, and enhance the bioavailability of other ingredients.
6. **Shuddha Dhattura:** Used for its anti-inflammatory and analgesic properties.
7. **Shuddha Gandhaka:** Enhances metabolism and has detoxifying properties.
8. **Tamra Bhasma:** Known for its liver-protective and anti-inflammatory properties.
9. **Ela, Tvaka, and Patra:** Improve digestion, reduce nausea, and have carminative properties.
10. **Nagakeshara:** Has anti-inflammatory and astringent properties.
11. **Shankha Bhasma:** Acts as an antacid and digestive aid.
12. **Bilva Majja:** Known for its digestive and astringent properties.
13. **Karchura:** Possesses digestive and anti-inflammatory properties.
14. **Bhringaraja Rasa:** Known for its liver-protective and rejuvenating properties.

PHARMACOKINETICS

1. **Absorption:** The bioavailability of minerals and active compounds is enhanced by the presence of Trikatu (Shunthi, Maricha, Pippali), which stimulates digestion and absorption.
2. **Distribution:** The active components are distributed via the bloodstream to the target tissues, particularly the digestive and respiratory systems.
3. **Metabolism:** Ingredients like Shunthi, Maricha, and Pippali are metabolized in the liver. Purified mercury, sulphur, and other minerals undergo specific metabolic processes to provide therapeutic benefits without toxicity.
4. **Excretion:** The waste products of these ingredients are excreted primarily through the kidneys (urine) and intestines (feces). Detoxifying agents ensure efficient elimination of residual substances from the body.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Critical Review of Sutashekhara Rasa	Vd. Karunanidhi Sharma, Research officer, Multani Pharmaceutical Ltd., New Delhi,	Sutashekhara Rasa, from Yoga Ratnakara, is a renowned formulation with 19 ingredients, including gold, influencing its cost. Available as Svarna Sutashekhara Rasa (with gold) and Sada Sutashekhara Rasa (without gold), scholars have modified it to enhance safety and reduce expenses while maintaining efficacy. Its diverse ingredients suggest effectiveness for various indications.
2.	Scientific Explanation of Mode of Action of Sutshekhara Rasa in Amlapitta with Special Reference to Acid Peptic Disorders: A Review	Ajay Kumar, Lecturer, Dept. of Kayachikitsa & Panchkarma, Government Post Graduate Ayurveda College and Hospital, Varanasi, Uttar Pradesh, India	Sutashekhara Rasa effectively treats Amlapitta by alleviating symptoms and promoting overall health. Its anticholinergic and direct antacid properties make it beneficial in managing the condition, especially when combined with a tailored lifestyle regimen.
3.	A Review on the Role of Sutashekhara Rasa as a Effective Ayurvedic Formulation for Amalapitta	Jagtap Pooja A., PG Scholar, Shalyatantra Department, Government Ayurved College, Nagpur, MHA.	Sutashekhara Rasa rectifies the imbalanced state of pitta, enhancing overall digestion and promoting proper Agni function. It's theorized that substances with dry (Ruksha), light (Laghu), pungent (Katu), and hot (Ushna) properties can mitigate the vitiated form of pitta, ensuring optimal Agni function. This study holds promise as a significant advancement in Amlapitta treatment.
4.	Review on Pharmacokinetic and Pharmacodynamic Action of Sutashekhara Rasa	Sourabh D. Chougule, Department of Rasashastra & Bhaishajya Kalpana, Yashwant Ayurvedic Medical College P.G.T & R.C Kodoli, Panhala, Kolhapur-416114, Maharashtra, India	Sutashekhara Rasa, found in Yogaratnakara under Amlapitta Rogadhikara, belongs to Shamaka Chatushka. Its ingredients, primarily Kashaya, Tikta & Madhura Rasatmaka, possess Laghu, Ruksha Guna & Ushna virya. They exhibit Vatanulomana, Dipana, & Pachana properties, making them effective in conditions like Amalapitta, Shula, Vanti, Panchakasa, Pancha gulma. Ginger juice, honey, sugar milk are used as Anupana to enhance its effects. This article explores Sutashekhara Rasa mechanism of action in these diseases.

4.1.P Navayasa Loha

Reference: A.F.I.-II, Lauha,17:2, Cha.Sa.Chi.16/70-71

त्र्यूषणत्रिफलामुस्तविडङ्गचित्रकाः समाः।
नवायोरजसो भागास्तच्चूर्णं क्षौद्रसर्पिषा।।
भक्षयेत् पाण्डुहृद्रोगकुष्ठार्शःकामलापहम्।
नवायसमिदं चूर्णं कृष्णात्रेयेण भाषितम्।। (Cha.Chi. 16/70-71)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Shunthi	Rz.	1 Part
Maricha	Fr.	1 Part
Pippali	Fr.	1 Part
Hritaki	P.	1 Part
Bibhitaki	P.	1 Part
Amalaki	P.	1 Part
Musta	Rz.	1 Part
Vidanga	Fr.	1 Part
Chitraka	Rt.	1 Part
Lauha Bhasma	–	9 Parts

Procedure:

1. Take all the required dried ingredients for Navayasa Loha. Ensure each ingredient is clean and free from impurities.
2. Using a Khalva Yantra (traditional mortar and pestle) or a grinder, grind each ingredients from Shunthi to Chitraka separately into a fine powder.
3. Combine all the powders together in a clean and add remaining dravyas. Mixing properly until it becomes suitable for making tablets or pills, then roll it into tablets or pills.
4. Expose the tray to sunlight or under hot air oven for several hours to days until the material is completely dry.
5. Once fully dried, collect the dried material. This final product is called Navayasa Loha.
6. Store the Navayasa Loha in a clean, dry, airtight container to preserve its potency.

Dose: 250 mg.

Anupana: Madhu, Ghrita.

Indications: Pandu, Hridroga, Kushtha, Arsha, Kamala.

PHARMACODYNAMICS

1. **Shunthi**: Possesses anti-inflammatory, digestive, and carminative properties, helping to improve digestion and reduce inflammation.
2. **Maricha**: Enhances digestion, increases bioavailability of other ingredients, and has carminative properties.

3. **Pippali**: Stimulates digestion and metabolism, and enhances the absorption of nutrients.
4. **Hritaki**: Known for its laxative, digestive, and anti-inflammatory properties.
5. **Bibhitaki**: Has astringent, digestive, and detoxifying properties.
6. **Amalaki**: Rich in vitamin C, it acts as a potent antioxidant, supports digestion, and balances all three doshas, particularly Pitta.
7. **Musta**: Known for its digestive, anti-inflammatory, and carminative properties.
8. **Vidanga**: Has anthelmintic, digestive, and carminative properties, and helps in detoxification.
9. **Chitraka**: Stimulates digestion, improves metabolism, and has anti-inflammatory properties.
10. **Lauha Bhasma**: Provides elemental iron, which is crucial for treating anaemia (Pandu), and improves hemoglobin levels and overall vitality.

Pharmacokinetics

1. **Absorption**: The bioavailability of iron and other active compounds is enhanced by the presence of bioavailability enhancers like Maricha and Pippali. The fine particulate nature of Lauha Bhasma also aids in its absorption.
2. **Distribution**: The active components are distributed via the bloodstream to various tissues, particularly targeting the digestive system, blood, and skin.
3. **Metabolism**: Ingredients like Shunthi, Maricha, and Pippali are metabolized in the liver. The iron from Lauha Bhasma is incorporated into the hemoglobin and other iron-containing proteins, while other ingredients undergo biotransformation to provide their therapeutic effects.
4. **Excretion**: The waste products of these ingredients are excreted primarily through the kidneys (urine) and intestines (feces). The detoxifying agents ensure efficient elimination of residual substances from the body.

Research Updates

Sr.No.	Article Name	Author Name	Result
1.	Effect of Navayasa Lauha, An Ayurvedic Herbomineral Formulation on Experimentally-Induced Iron Deficiency Anaemia	Namrata Joshi, Depart. of Rasashastra and B.K, FOA, IMS, BHU, Varanasi, U.P.	In a rat study on nutritional iron deficiency anaemia induced by a rice milk diet, NL treatment for 45 days significantly improved hemoglobin%, PCV, TRBC, MCV, MCH, and serum iron levels ($P < 0.001$), with a decrease in TIBC ($P < 0.01$). NL showed promise as a safe herbomineral medicine for iron deficiency anaemia treatment, with no gastrointestinal upset. The rise in serum iron and drop in TIBC suggest NL's direct effect on iron stores.
2.	Exploration of Navayasalauha—A Literary Scientific Study	Namrata Joshi, Depart. of Rasashastra and B.K, FOA, IMS, BHU, Varanasi, U.P.	The study examines different formulations of Navayas Lauha, uncovering variations in composition and nomenclature. It discusses differing perspectives, types of Lauha used, and traditional views. Additionally, it covers herbal constituents, administration methods, doses, durations, and indications, notably focusing on its use for Panduroga (iron deficiency anaemia).
3.	Assess The Efficacy of Navayasa Lauha in Management of Pittaja Pandu	Dr. Milind G., Assistant Professor Kayachikitsa Vasantdada Patil Ayurvedic Medical College Sangli (MHA)	Ayurveda identifies "Pandu" as a condition akin to anaemia, characterized by low hemoglobin or decreased RBC count. Both Ayurveda and allopathic medicine prescribe iron-containing treatments for anaemia. Many "lauha kalpas" in Ayurveda are effective for Pandu. Hence, this study aimed to evaluate Navayase Loha's efficacy in treating Pandu.
4.	Comparative Clinical Study of Dhatri Lauha and Navayasa Lauha in Garbhini Panduroga with Reference To Anaemia in Pregnancy.	Dr. Bhagyashri Mahavir Khot, Asso. Professor Streerog-Prasutitantra Dept.R.A.Podar Medical College Worli, Mumbai, MHA.	In a study with 60 pregnant women aged 18 to 35, Dharti Lauha and Navayasa Lauha effectively treated iron deficiency anaemia symptoms. Dharti Lauha notably improved Hb gm%, RBC, MCV, PCV, serum iron percent, transferrin saturation, and TIBC. Navayasa Lauha significantly improved Hb gm%, RBC, PCV, MCV, MCH, serum iron, transferrin saturation, and TIBC. Dharti Lauha specifically addressed pregnancy-related anaemia.

4.1.9 Ichchhabhedi Rasa

Reference: A.F.I.-I, Rasayoga, 20:5, B.R.Udararoga

शुण्ठी मरिचसंयुक्तं रसगन्धकटङ्कणम्।
जैपालास्त्रिगुणाः प्रोक्ताः सर्वमेकत्र पेषयेत्।।
इच्छाभेदीद्विगुञ्जः स्यात्सितया सह पाययेत्।
यावन्तश्शुल्लुकाः पीतास्तावद्वेगाद् विरेचयेत्।।
तक्रौदनञ्च दातव्यमिच्छाभेदी यथेच्छया।।

(B.R.Udararoga, 40/84-85)

Ingredients Used

Drug Name	Part Used	Proportion
Shunthi	Rz.	1 Part
Marica	Fr.	1 Part
Shuddha Parada	–	1 Part
Shuddha Gandhaka	–	1 Part
Shuddha Tankana	–	1 Part
Shuddha Jayaphala	Enm.	3 Parts

Procedure:

1. Collect all the ingridents of Ichchhabhedi Rasa.
2. First, prepare Kajjali by triturating Shuddha Parada and Shuddha Gandhaka in a mortar (Khalva Yantra).
3. Add the rest of the ingredients and grind well to ensure uniform mixing.
4. Shape the mixture into pills the size of 2 ratti (250 mg).
5. Dry the pills in the shade.
6. Preserve the dried pills in a glass container.

Dose: 250 mg.

Anupana: Cold Water.

Indications: Anaha, Udara roga.

Pharmacodynamics

1. **Shunthi**: Possesses digestive, carminative, and anti-inflammatory properties. It helps in reducing abdominal bloating (Anaha) and enhancing digestion.
2. **Maricha**: Stimulates digestion, increases the bioavailability of other ingredients, and has carminative properties.
3. **Shuddha Parada**: Acts as a potent antimicrobial and detoxifying agentIt helps in balancing the three doshas (Vata, Pitta, Kapha) and enhances the overall efficacy of the formulation.
4. **Shuddha Gandhaka**: Known for its detoxifying and rejuvenating properties, it helps in improving metabolism and acts as a potent anti-inflammatory agent.
5. **Shuddha Tankana**: Assists in liquefying mucus, easing digestive issues, and balancing Pitta dosha.
6. **Shuddha Jayaphala**: Used in higher proportion, it has digestive, carminative, and laxative properties, aiding in relieving constipation and abdominal disorders.

Pharmacokinetics

1. **Absorption**: The bioavailability of the active compounds is enhanced by the presence of bioavailability enhancers like Maricha. The fine particulate nature of the purified ingredients also aids in their absorption.
2. **Distribution**: The active components are distributed via the bloodstream to various tissues, particularly targeting the digestive system.
3. **Metabolism**: Ingredients like Shunthi and Maricha are metabolized in the liver. Purified mercury, sulphur, and borax undergo specific metabolic processes to provide therapeutic benefits without toxicity.
4. **Excretion**: The waste products of these ingredients are excreted primarily through the kidneys (urine) and intestines (feces). Detoxifying agents ensure efficient elimination of residual substances from the body.

Research Updates

Sr.No.	Article Name	Author Name	Result
1.	Pharmaceutical Standardization of Ichchhabhedi Rasa—An Ayurvedic Formulation	Darshana Mehkarkara, Senior Research Fellow, Regional Ayurveda Institute for Mother and Child Health, Nandanvan, Nagpur (MHA)	The study aimed to standardize Ichchhabhedi Rasa. Materials were sourced from Wardha's local market and authenticated. Ichchhabhedi Rasa was prepared according to traditional methods. Physico-chemical properties were assessed to ensure quality and safety, meeting pharmacopoeial standards. It was concluded that 100g of Ichchhabhedi Rasa could be obtained from 110 g of raw drugs, aligning with standards.
2.	Ichchhabhedi Rasa – A Herbo - Mineral Formulation Review	Nanditha Kamath, 2nd Year P.G Scholar, Dept. of Rasashastra & Bhaishajya Kalpana, Taranath Govt. Ayurvedic Medical College, Karnataka.	"Ichchhabhedi Rasa, comprised of Shunthi, Maricha, Shuddha Parada, Shuddha Gandhaka, Shuddha Tankana, and Shuddha Jayapala, exhibits potent purgative effects when administered in appropriate doses and with suitable anupana. This article aims to review its pharmacological properties and discuss its likely mode of action."

4.1.R Krimikuthara Rasa

Reference: A.F.I.-II, Rasayoga, 16:12, R.Ta.Sa.Kharaliya Rasayana / P.103

कर्पूरञ्चाष्टभागञ्च कुटजश्चैकभागिकः।
तत्समानं त्रायमाणमजमोदा विडङ्गकम्।।
हिङ्गुलं विषभागञ्च तत्समानं च केसरम्।
सर्वं दृढं च सम्मर्द्य भृङ्गराजरसैस्तथा।।

पलाशबीजसम्मिश्रमुन्दुरीरसभावितम्।
ब्राह्मीरसं ततो दत्त्वासिध्येत्कृमिकुठारक:।।
वल्लमात्रां वटीं कुर्याद्दद्याद्धेमसमन्विताम्।
कुर्यात्कृमिविनाशञ्च सर्वश: सप्तभिर्दिनै:।।

(Rasayogasagara, Ist Part, 322, p. 328)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Karpura	–	8 Parts
Indrayava	Sd	1 Part
Trayamana	Pl.	1 Part
Ajamoda	Fr.	1 Part
Vidanga	Fr.	1 Part
Shuddha Hingula	–	1 Part
Shuddha Vatsanabha	Rt.	1 Part
Nagakeshara	Adr.	1 Part
Vijaya Rasa	Lf.	Q.S. For Mardana
Palasha bija Churna	Sd.	15 Parts
Mushakaarni	Pl.	Q.S. For Mardana
Brahmi Rasa	Pl.	Q.S. For Mardana

Procedure:

1. Take all the required dried ingredients for Krimikuthara Rasa. Ensure each ingredient is clean and free from impurities.
2. Using a Khalva Yantra (traditional mortar and pestle) or a grinder, grind each ingredient, from Karpura to Nagakeshara, separately into a fine powder.
3. Filter each powdered ingredient through a clean cloth to remove any coarse particles.
4. Combine all the filtered powders in a clean, dry container. Mix thoroughly to ensure a uniform blend of all ingredients.
5. Filter the compound powder mixture once again through a clean cloth to ensure a fine consistency.
6. Add Vijaya patra leaf and soak it until it becomes dry.
7. Add Palasha Bija Churna and triturate properly.
8. Add Musakarni and Brahmi Svarasa, then triturate well until the mixture becomes suitable for making tablets or pills. Roll it into tablets or pills.
9. Expose the tablets or pills to sunlight or place them in a hot air oven for several hours to days until completely dry.
10. Once fully dried, collect the dried material. This final product is called Krimikuthara Rasa.
11. Store the Krimikuthara Rasa in a clean, dry, airtight container to preserve its potency.

Dose: 125- 375 mg.

Anupana: Svarnakshiri Mula Kvatha, Madhu.

Indications: Krimi Roga (Worm Infestation)

PHARMACODYNAMICS

1. **Karpura:** Possesses antimicrobial, anti-inflammatory, and carminative propertiesIt helps in relieving pain and inflammation caused by worm infestations.
2. **Indrayava:** Known for its anthelmintic and antimicrobial properties, it is effective in expelling intestinal worms.
3. **Trayamana:** Has digestive, anti-inflammatory, and anthelmintic properties, aiding in the elimination of parasites.
4. **Ajamoda:** Exhibits carminative, digestive, and anthelmintic properties, helping to relieve symptoms of worm infestation.
5. **Vidanga:** Known for its potent anthelmintic action, it is effective against a wide range of intestinal parasites.
6. **Shuddha Hingula:** Acts as a potent antimicrobial and detoxifying agent, enhancing the formulation's overall efficacy.
7. **Shuddha Vatsanabha:** Used in very small amounts, it acts as a stimulant, aiding in digestive functions and helping to expel parasites.
8. **Nagakeshara:** Has anti-inflammatory and antimicrobial properties, aiding in the relief of symptoms associated with worm infestations.
9. **Vijaya Rasa:** Known for its anti-inflammatory and analgesic properties, helping to reduce pain and inflammation.
10. **Palasha Bija Churna:** Possesses anthelmintic properties, making it effective against intestinal worms.
11. **Mushakarani:** Exhibits digestive and anthelmintic properties, aiding in the elimination of intestinal parasites.
12. **Brahmi Rasa:** Known for its neuroprotective and cognitive-enhancing properties, it also helps in reducing stress and inflammation.

PHARMACOKINETICS

1. **Absorption:** The bioavailability of active compounds is enhanced by the presence of bioavailability enhancers like Ajamoda. The fine particulate nature of purified ingredients aids in their absorption.
2. **Distribution:** The active components are distributed via the bloodstream to various tissues, particularly targeting the digestive system where intestinal worms reside.
3. **Metabolism:** Ingredients like Karpura, Ajamoda, and Vidanga are metabolized in the liver. The

anthelmintic components act directly in the gastrointestinal tract to expel worms.

4. **Excretion**: The waste products of these ingredients are excreted primarily through the intestines (feces) and kidneys (urine) Detoxifying agents ensure efficient elimination of residual substances from the body.

Research Updates

Sr.No.	Article Name	Author Name	Result
1.	Study of Krimikuthara Rasa (A Herbal Preparation) on Ascariasis in Cow Calves	R.G. Jani, Department of Veterinary Medicine, College of Veterinary Science & Animal Husbandry, Anand Campus, Anand-388 001, Gujarat, India	Krimikuthara Rasa was administered orally to 45 cow calves under six months old, regardless of sex, at a dose of 13 mg/kg body weight. Parasitic load was qualitatively and quantitatively evaluated post-administration. The drug effectively eliminated parasites by the 14th day, leading to complete clinical recovery.

4.2 Parpati Rasayana

Intoduction: Parpati was first formulated in the th century under the name Rasa Parpati. It is a Murchchhana variety known for its disease-destroying properties (vyadhiharana) Mandagni, Gomaya, Kadali, and Parpatakara each have their own significance in the preparation of Parpati. Among the different types, Mridu and Madhyama Paka Parpati are recommended for use, while Kharapaka should be discarded.

Parpati holds prime importance in the treatment of Grahni (digestive disorders). It is a prestigious and reliable preparation in Rasa Shastra for managing Grahani. The preparation of Parpati must be carried out with great care, adhering to the guidelines provided by various classical texts. This includes the purification of mercury, sulphur, and other materials, as well as the proper incineration of minerals and metals used in the preparation of various Parpati formulations. Only then does Parpati become safe, effective, and beneficial for therapeutic purposes.

General Method of Parpati Preparation

1. Purification of Ingredients

❖ **Purify Parada (Mercury) and Gandhaka (Sulphur):**

- Use traditional purification methods.
- Mix purified Parada and Gandhaka in an iron mortar to prepare Kajjali.
- Ensure Kajjali achieves the desired physical and chemical characteristics: blackish color, smooth texture, collyrium-like appearance, minute particle size, and filling the grooves of the fingers.

2. Preparation of Mixture

❖ **Add Other Required Drugs:**

- Depending on the type of Parpati Kalpana, incorporate additional drugs.
- Triturate the mixture in an iron mortar until it becomes a uniform, homogeneous mixture.

3. Heating and Molding

❖ **Heat the Mixture:**

- Place the mixture in a ghee-smeared iron pan.
- Heat over low fire (Mandagni) until it melts uniformly.

4. Mold the Mixture:

- Transfer the melted contents onto a clean banana leaf (Kadali Patra) placed over a bed of cow dung (Gomaya).
- Cover with another banana leaf and spread a little fresh cow dung over it.
- Press gently and allow it to cool.

5. Final Steps

❖ **Dry and Store:**

- Remove and dry the Parpati flakes.
- Powder the flakes and store them in an airtight glass bottle or jar.

Note : The color and appearance of the Parpati depend on the ingredients used. Proper preparation is indicated by the impression left on the Parpati from the pressing of the banana leaf.

Dosage

Regarding the dosage (matra) and internal use of Parpati preparations, there are basically two types of intake regimens:

❖ Samanya Prayoga (General Use)

❖ Kalpa or Vardhamana Prayoga (Gradual Use)

1. **Samanya Prayoga**: Parpati is prescribed in a dose of Ratti (125 mg) mixed with fried Jiraka (cumin seeds) and Hingu (asafetida) in divided doses. In this regimen, dietary restrictions are not necessary. For conditions like Unmada (insanity) and Apasmara (epilepsy), the starting dose mentioned is Ratti per day.

2. **Kalpa Prayoga or Vardhamana Prayoga**: There are many references for this regimen in classical texts, highlighted below:
   a. **Reference from Rasa Tarangini**: The text states that Ratti (125 mg) of Parpati preparation is given as a starting dose and is gradually increased up to Ratti (125 mg).
   b. **According to Acharya Chakrapani**: The dose of Parpati is started at Ratti (125 mg) and is then gradually increased up to Ratti (125 mg).

PATHYA-APATHYA (DO'S AND DON'TS) DURING PARPATI INTAKE

❖ **Pathya (Do's)**:

According to Rasa Tarangini, the following should be consumed during Parpati intake:

- Kakamachi (Black nightshade)
- Patola (Pointed gourd)
- Pugiphala (Betel nut)
- Aradraka (Ginger)
- Kadalipuspha (Banana flowers)
- Brinjal
- Old Shalidhanya (Aged rice)
- Godugdha with Sharkara (Cow's milk with sugar)

❖ **Apathya (Don'ts)**:

The following should be avoided:

- River water or well water (use buttermilk instead)
- Amla sevana (sour foods)
- Shita Jala Snana (cold water baths)
- Sita vayu sevana (exposure to cold winds)
- Krodha (anger) and Chinta (stress)
- Ushna dravya sevana (hot substances)
- Tikta dravyas (bitter substances) like Nimba (neem)
- Sweet substances like Guda (jaggery)
- Anupa mamsa (aquatic/frozen meat)
- Stri sambhasana (sexual activities)

Additional Guidelines from Acharya Chakrapani:

- After taking Parpati, the patient should chew a lot of betel nut.
- On the third day, the patient can consume meat, ghee, and milk but should avoid.
- Vidahi anna (foods causing acidity)
- Sexual intercourse
- Banana root
- Mustard oil
- Small fish
- Aquatic birds
- Drink water upon waking up early in the morning.

4.2.A Panchamrita Parpati

Reference: A.F.I.-I, Parpati, 16:1, B.R.Grahani Rogadhikara

अष्टौ गन्धकतोलका रसदलं लौहं तदर्द्धं शुभम्।
लौहार्द्धञ्च वराभ्रकं सुविमलं ताम्रं तदभ्रार्द्धिकम्।।
पात्रे लौहमये च मर्दनविधौ चूर्णीकृतञ्चैकतः।
दर्व्या बादरवह्निनाऽतिमृदुना पाकं विदित्वादले।।
रम्भायां लघु ढालयेत् पदुरियं पञ्चामृता पर्पटी।
ख्याता क्षौद्रघृतान्विता प्रतिदिनं गुञ्जाद्वयं वृद्धितः।।
लौहे मर्दनयोगतः सुविमलं भक्ष्यक्रिया लौहवत्।
गुञ्जाष्टावथवा त्रिकत्रिगुणितं सप्ताहमेवं भजेत्।।
नानावर्णग्रहण्यामरुचिसमुदये दुष्टदुर्नामकादौ।
छर्द्यां दीर्घातिसारे ज्वरभरकलिते रक्तपित्ते क्षयेऽपि।।
वृष्याणां वृष्यराज्ञी वलिपलितहरा नेत्ररोगैकहन्त्री।
तुन्दं दीप्तस्थिराग्निं पुनरपि नवकं रोगिदेहं करोति।।

(B.R.Grahani Rogadhikara, 8/461-466)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Shuddha Gandhaka	–	96 gms
Shuddha Parada	–	48 gms
Lauha Bhasma	–	24 gms
Abhraka Bhasma	–	12 gms
Tamra Bhasma	–	6 gms

Procedure:

1. Prepare Kajjali with purified mercury (parada) and sulphur (gandhaka) in a khalva.
2. Add the remaining ingredients one by one and mix well in a khalva.
3. Place the mixture in an iron vessel and heat using a Sikata yantra.
4. Make a shallow pit in fresh cow dung and line it with a kadali or eranda leaf.
5. When the mixture melts and becomes liquid, pour it onto the leaf.
6. Cover with another leaf and gently press with fresh cow dung.
7. Allow the mixture to cool.
8. Remove and powder the flakes of the medicine.
9. Store in air tight glass container.

Dose: 125 to 250 mg.

Anupana: Honey, Ghee, Bhrishta Jiraka Churna.

Indications: Grahani, Arsha, Chardi, Atisara, Jvara, Aruchi, Kshaya, Raktapitta.

PHARMACODYNAMICS

1. **Shuddha Gandhaka:** Possesses antimicrobial, anti-inflammatory, and detoxifying properties. It helps

in managing digestive disorders, infections, and inflammatory conditions.

2. **Shuddha Parada**: Acts as a potent antimicrobial and detoxifying agent. It enhances the efficacy of other ingredients and helps in balancing the three doshas (Vata, Pitta, Kapha).
3. **Lauha Bhasma**: Provides essential iron, which is crucial for treating anaemia and improving hemoglobin levels. It also has rejuvenating properties and enhances overall vitality.
4. **Abhraka Bhasma**: Known for its rejuvenating, anti-aging, and adaptogenic properties. It supports the respiratory system, improves digestion, and enhances overall health.
5. **Tamra Bhasma (Copper Ash)**: Possesses antimicrobial, anti-inflammatory, and hepatoprotective properties. It aids in improving digestion, liver function, and overall metabolic processes.

PHARMACOKINETICS

1. **Absorption**: The bioavailability of active compounds is enhanced by the presence of bioavailability enhancers like Shuddha Parada and Shuddha Gandhaka. The fine particulate nature of the bhasmas (ashes) aids in their absorption.
2. **Distribution**: The active components are distributed via the bloodstream to various tissues, particularly targeting the digestive system, liver, and blood.
3. **Metabolism**: Ingredients like Lauha Bhasma and Tamra Bhasma are metabolized in the liver. The other ingredients undergo specific metabolic processes to provide their therapeutic benefits without toxicity.
4. **Excretion**: The waste products of these ingredients are excreted primarily through the kidneys (urine) and intestines (feces). Detoxifying agents ensure efficient elimination of residual substances from the body.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	A Clinical Study of Role of Panchamrita Parpati Ingrahani Vyadhi and Life Style Principle.	Dr. Ashwini Jadhav, Assistant Professor in Kayachikitsa Department, Bharti Vidyapeeth Ayurved College and Hospital, Pune, MHA.	This paper discusses a case study involving a 30-year-old male patient presenting symptoms of Muhurbaddam-Muhurdravam, Apakva Malapravrita, Udara Shula, Udara Gaurava, and Aruchi. Treatment with Panchamrita Parpati resulted in significant symptom improvement after 45 days. The study explores the role of Panchamrita Parpati in Grahani Vyadhi and emphasizes lifestyle principles.

4.2.B Bola Parpati

Reference: A.F.I.-I, Parpati, 16.2, YoR., Pradara

सूतगन्धकसुकज्जलिकायाः पर्पटी समयुता समभागम्।
बोलचूर्णविहितं प्रतिवाप्यं स्याद्रसोऽयमसृगामयहारी।।
वल्लयुग्मयुगलं प्रीतिदेयं शर्करामधुयुतः किल दत्तः।
रक्तगुल्मगुदजासृतियोनिस्त्रावमाशु विनिवारयतीशः।। (Y.R., p. 447)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Shuddha Parada	–	1 Part
Shuddha Gandhaka	–	1 Part
Bola	(Exd.)	2 Parts

Procedure:

1. Prepare Kajjali with purified mercury (parada) and sulphur (gandhaka) in a khalva.
2. Add the remaining ingredient— bola one by one and mix well in a khalva.
3. Place the mixture in an iron vessel and heat using a Sikata yantra.
4. Make a shallow pit in fresh cow dung and line it with a kadali or eranda leaf.
5. When the mixture melts and becomes liquid, pour it onto the leaf.
6. Cover with another leaf and gently press with fresh cow dung.
7. Allow the mixture to cool.
8. Remove and powder the flakes of the medicine.
9. Store in air tight glass container.

Indications: Raktapradara, Raktapitta, Raktarsha.

PHARMACODYNAMICS

1. **Shuddha Parada (Purified Mercury)**: Acts as a potent antimicrobial, detoxifying, and rejuvenating agent. It enhances the therapeutic efficacy of the formulation and helps in balancing the three doshas (Vata, Pitta, Kapha).
2. **Shuddha Gandhaka (Purified Sulphur)**: Possesses anti-inflammatory, antimicrobial, and detoxifying propertiesIt aids in reducing inflammation, managing infections, and purifying the blood.
3. **Bola (Commiphora myrrha Exudate)**: Known for its astringent, antimicrobial, and anti-inflammatory propertiesIt is effective in stopping excessive

bleeding, managing infections, and promoting tissue healing.

PHARMACOKINETICS

1. **Absorption**: The bioavailability of active compounds is enhanced by the presence of bioavailability enhancers like Shuddha Parada and Shuddha Gandhaka. The fine particulate nature of the ingredients aids in their absorption.
2. **Distribution**: The active components are distributed via the bloodstream to various tissues, particularly targeting the circulatory system and areas with bleeding disorders.
3. **Metabolism**: Ingredients like Shuddha Parada and Shuddha Gandhaka undergo specific metabolic processes to provide their therapeutic benefits without toxicity. Bola is metabolized primarily in the liver.
4. **Excretion**: The waste products of these ingredients are excreted primarily through the kidneys (urine) and intestines (feces). Detoxifying agents ensure efficient elimination of residual substances from the body.

RESEARCH UPDATES

Sr. No.	Article Name	Author Name	Result
1.	Comparative Pharmaceutico-Analytical Study of Self Prepared Bola Parpati and Market Sample of Bolaparpati	Dr. Monish Maruti Shinde, Assisstant Professor, Department of Rasashastra and Bhaishajya Kalpana, Dr. Vedprakash-Patil Ayurveda College, Jalna, Maharashtra, India	Parada and Gandhaka underwent purification following respective guidelines. Kajjali was prepared from purified Parada and Gandhaka. Bola parpati, prepared according to Yogaratnakara, was compared with market samples, assessing pharmaceutical and analytical properties. Minor differences between self-prepared and market samples were observed, suggesting the need for additional pre-clinical and clinical research to determine Bola parpati's efficacy.

4.3 Kupipakva Rasayana

In Rasa Chikitsa, numerous Rasaushadhis are mentioned for controlling and curing diseases. Among these, Kupipakva Rasayana is recognized as a potent and effective medicine for treating various complicated diseases. Its advantages include ease of palatability, long-lasting effects, rapid onset of action, and desired results, all contributing to its greater efficacy.

The name and indication of the preparation can change based on modifications in procedure, ingredients, Bhavana (levigation) drugs, and heating patterns. Examples include Rasa Sindura, Makaradhvaja, Malla Sindura, Tala Sindura, Rasa Karpura, and Rasa Pushpa. When mercury is processed with metals, it forms an amalgam that leads to an intermediate product. The main chemical reaction promoters are Gandhaka (sulphur) and Parada (mercury), where Gandhaka is responsible for forming sulphides. Mercury reacts with sulphur to form mercuric sulfide (HgS).

Kupipakva Rasayana preparations hold unique importance in Rasashastra due to their quicker action at minimal doses compared to other formulations. The heating pattern and preparation of Kajjali are crucial for maximizing yield and increasing the effectiveness of the preparation without causing side effects. The best heating pattern for Kupipakwa preparation, as mentioned in classical texts, is Kramagni, which involves heating in a gradual sequence.

The recommended heating sequence is as follows:

- Mridu Agni (Mild Heat): 120-250°C for 6 hours.
- Madhyama Agni (Moderate Heat): 250-450°C for 6 hours.
- Tivra Agni (Intense Heat): 450-630°C for 6 hours.

The heating should be intermediate during the preparation to ensure optimal results.

General Method of Preparation

PREPARATION OF KAJJALI AND KUPIPAKVA RASAYANA

1. Kajjali Preparation

- **Ingredients**
  - Shodhita Parada (purified mercury)
  - Shodhita Gandhaka (purified sulphur)
- **Bhavana (Levigation):**
  - Herbal juice, such as Vatankura Svarasa or Semal Svarasa, is used for levigation.
- **Process:**
  - The prepared Kajjali is placed in a glass bottle known as Aatishi Shishi, made with seven layers of mud and cloth.
  - The bottle is placed in a Baluka Yantra for heating.

2. Role of Temperature Patterns

Three temperature patterns are used in the preparation:

- **Mild Heat (Mridu Agni):**
  - Temperature: 120-250°C

- Kajjali starts melting.

❖ **Intense Heat (Madhyama Agni):**
- Temperature: 250-450°C
- Kajjali starts boiling.
- After 12 hours of Mridu and Madhyama Agni, yellow fumes of Gandhaka disappear.

❖ **More Intense Heat (Tivra Agni):**
- Temperature: 450-630°C
- Duration: 6 hours
- The preparation accumulates in the neck (Galastha) or bottom (Talastha) of the Kupi, depending on the type.

ADDITIONAL STEPS DURING HEATING

❖ An iron rod (shalaka) is inserted in the mouth of the Kupi to avoid any obstruction.

❖ Perform the copper coin test to ensure the preparation is ready.

❖ Stop heating and remove the Kupi from the Yantra.

❖ Allow the Kupi to cool naturally (svangashita).

EXTRACTION OF THE PREPARATION

❖ **Post-Cooling:**
- Dip a thread in kerosene oil and tie it 2 cm below the portion where the preparation has accumulated.
- Burn the thread and cover the bottle with a wet cloth to break the neck of the Kupi safely.
- Carefully collect the preparation from the neck of the glass bottle.
- This method ensures that the Kajjali and Kupipakva Rasayana are prepared effectively, achieving maximal yield and effectiveness without unwanted side effects.

4.3.a Svarna Vanga

Reference: A.F.I.-I, Kupipakva, 15:9, Rasamrita

रुद्रभागमितं वङ्गं दर्व्यां दत्वाऽनले न्यसेत्।।
विदुते तु तदर्धं हि सूत्रं तत्र विनिक्षिपेत्।
शीघ्रं निक्षिप्य खल्वेऽथ निम्बूनीरेण पेषयेत्।।
दत्वाऽथ सैन्धवं किञ्चिद् बहुशः क्षालयेत्ततः।
नरसारं गन्धकं च रसतुल्यं प्रदापयेत्।।
सम्पेष्य चातियत्नेन श्लक्ष्णचूर्णं तु कारयेत्।
पाचयेत् सिकतायन्त्रे चतुर्यामप्रमतन्द्रितः।।
निर्धूमे जायमाने च काचकूपी मुखे भिषक्।
सन्दशेन गृहीत्वा च कूपीं भूमौ तु विन्यसेत्।।
कांचकूपीं विभिद्याथ कूपिकातलसंस्थितम्।
स्वर्णवङ्गं स्वर्णवर्णं भिषग्यत्नात् समाहरेत्।।

(Rasamrita, 3/95-100)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Vanga Bhasma	–	144 gms
Shuddha Parada	–	72 gms
Nimbu Svarasa	Fr.	Q.S Mardana
Shuddha Navasadara	–	72 gms
Shuddha Gandhaka	–	72 gms

Procedure:

1. Collect all the ingredients of Svarna Vanga.
2. Heat Shuddha Vanga (tin) in an iron ladle until it melts.
3. Add half the amount of purified mercury to the melted Shuddha Vanga.
4. Immediately pour the mixture into a mortar (khalva) and grind it well until it becomes a fine powder.
5. Add a small amount of Saindhava Lavana (rock salt).
6. Triturate the mixture with nimbu (Citrus medica Var. acida) juice.
7. Wash the mixture with water until the blackness ceases and dry the mixture.
8. Add equal parts of navasadara (Ammonium chloride) and Shuddha Gandhaka (sulphur) to the mercury.
9. Grind well until a fine, smooth powder (Kajjali) is prepared.
10. Fill the prepared powder into a glass bottle (Kachakupi).
11. Place the Kachakupi in a sand bath (Baluka Yantra).
12. Apply heat for 4 Yamas (12 hours) carefully.
13. When fumes stop coming out of the Kachakupi, remove it from the furnace along with the Valuka Yantra.
14. Place it on the earth to cool naturally.
15. Once cooled, take out the Kachakupi.
16. Clean and break it from the middle.
17. Carefully collect the golden-colored Svarna Vanga from the bottom of the bottle.

Dose: 125 – 250 mg.

Anupana: Butter, Honey.

Indications: Jirna Kasa, Shvasa, Prameha, Mutramarga Roga.

PHARMACODYNAMICS

1. **Vanga Bhasma:** Possesses antimicrobial, anti-diabetic, and anti-inflammatory propertiesIt is beneficial in managing respiratory conditions, urinary disorders, and diabetes.

2. **Shuddha Parada (Purified Mercury)**: Acts as a potent antimicrobial, detoxifying, and rejuvenating agent. It enhances the therapeutic efficacy of the formulation and helps in balancing the three doshas (Vata, Pitta, Kapha).
3. **Shuddha Gandhaka (Purified Sulphur)**: Provides antimicrobial, anti-inflammatory, and detoxifying effects. It helps in managing infections, reducing inflammation, and purifying the blood.
4. **Shuddha Navasadara (Ammonium Chloride)**: Known for its expectorant and diuretic properties. It aids in clearing respiratory passages and promoting urine flow.

PHARMACOKINETICS

1. **Absorption**: The bioavailability of active compounds is enhanced by the presence of bioavailability enhancers like Shuddha Parada and Shuddha Gandhaka. The fine particulate nature of the bhasmas aids in their absorption.
2. **Distribution**: The active components are distributed via the bloodstream to various tissues, particularly targeting the respiratory system, urinary tract, and metabolic pathways.
3. **Metabolism**: Ingredients like Vanga Bhasma and Shuddha Gandhaka undergo specific metabolic processes to provide their therapeutic benefits without toxicity. The other ingredients are metabolized primarily in the liver.
4. **Excretion**: The waste products of these ingredients are excreted primarily through the kidneys (urine) and intestines (feces). Detoxifying agents ensure efficient elimination of residual substances from the body.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Pharmaceutical Study of Svarna Vanga by Three Different Methods	Dr. Preeti, P.G. Department of Rasa Shastra and Bhaishajya Kalpana, R.G.G. P.G. Ayurvedic College, Paprola, Distt. Kangra, H.P.	The study aimed to prepare Svarna Vanga using methods from Rasamritam and Rasa Tarangini, evaluating their therapeutic efficacy for Dyslipidemia. Green bottles were chosen for Kupipakva preparation due to heat tolerance and easy product collection. The final product, found at the bottle's base, had a golden-yellow color attributed to Navasadar. Its light nature was due to the fine disintegration of metal by Navasadara and Parada.
2.	Svarna – Vanga – A Short Duration Toxicity Study	Sharma, Dept. of Rasa Shastra, Institute of Medical Sciences, Banaras Hindu University, Varanasi - 221 005, U.P., India	A 14-day animal experiment assessed Svarna-Vanga (SV) toxicity, starting from 12.5 mg/100 gm b.wt./day, the therapeutic dose. No tissue toxicity was seen at 12.5 mg and 25 mg/100 gm b.wt./day. At 50 mg/100 gm b.wt. And 100 mg/100 gm b.wt./day, one animal each exhibited liver fatty vacuolization and small intestine mucosal necrosis. Findings suggest the drug is non-toxic at therapeutic doses.
3.	Pharmaceutical Standardisation of Svarna Vanga—A Traditional Ayurvedic Preparation	Namrata Joshi, Associate Professor, Dept. of Rasa Shastra Faculty of Ayurveda, Institute of Medical Science, Banaras Hindu University, Varanasi- 221005, U.P.	Kupipakva Rasayanas, including Svarna Vanga, undergo complex chemical processes. Svarna Vanga's heating procedure, executed in three stages (2½ hours Mriduagni, 7½ hours Madhyamagni, and 8 hours Tivraagni) within 600°C-650°C using a Baluka yantra, is crucial for optimal reaction completion.
4.	Systemic Review of Svarna Vanga in Ayurvedic classics—A Kupipakva Rasayana	Amandeep Sharma, Assistant Professor, Department of Rasa Shastra, Desh Bhagat Ayurvedic College & Hospital, Mandi, Gobindgarh, Punjab, India.	Svarna Vanga, a Kupipakva Rasayana, comprises Vanga (Tin), Parada (Mercury), Gandhaka (Sulphur), Navasadara (Ammonium Chloride), and Kalmi Shora (Potassium Nitrate), as per Rasa Tarangini. Its preparation involves intricate chemical processes, emphasizing Kajjali preparation and heating patterns. Indicated for conditions like Madhumeha (diabetes mellitus), Svasa (respiratory disorders), and Pradara (menorrhagia), it also serves as a Vrishya (aphrodisiac).

4.3.B Makaradhvaja

Reference: A.F.I.-I, Kupipakva, 15: 2, B.R. Vajikarana

स्वर्णादष्टगुणं सूतं मर्दयेत् त्रिकगन्धकम्।
रक्तकार्पासकुसुमैः कुमार्यद्भिर्विमर्दयेत्।।
शुष्कं काचघटीं रुद्ध्वा बालुकायन्त्रगं हठात्।
पक्वं कुर्याद्रसेन्द्रं तन्नवार्ककिरणोपमम्।।

भागोऽस्य भागाश्चत्वारः कर्पूरस्य सुशोभनाः।
लवङ्गं मरिचं जातीफलं कर्पूरमात्रया।।
मेलयेद् मृगनाभिञ्च गद्याणकमितं ततः।
श्लक्ष्णापिष्टो रसो नाम जायते मकरध्वजः।।
वल्लं वल्लद्वयं वाऽथ ताम्बूलीदलसंयुतम्।
भक्षयेन्मधुरं स्निग्धं मृदुमांसमवातलम्।।

शृतशीतं सितायुक्तं दुग्धं गोभवमाज्यकम्।
मध्वाद्यं मिष्टमपरं मद्यानि विविधानि च।।
करोत्यग्निबलं पुंसां वलीपलितनाशनः।
मेधायुः कान्तिजननः कामोद्दीपनकृन्महान्।।
अभ्यासात्साधकः स्त्रीणां शतं जयति नित्यशः।
रतिकाले रतान्ते च पुनः सेव्यो रसोत्तमः।।
मानहानिं करोत्यासां प्रमदानां सुनिश्चितः।
कृत्रिमं स्थावरविषं जङ्गमं वर्षवारि च।।
न विकाराय भवति साधकानाञ्च वत्सरात्।
मृत्युञ्जयो यथाभ्यासान्मृत्युं जयति देहिनाम्।
तथायं साधकेन्द्रस्य जरामरणनाशनः।।

(B.R. Vajikarana, 74/237–246)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Shuddha Suvarna	–	12 gms
Shuddha Parada	–	96 gms
Shuddha Gandhaka	–	288 gms
Karpasa	Fl.	Q.S. Mardana
Kumari	Lf.	Q.S. Mardana

Procedure:

1. First cut shuddha svarna Patra into fine pieces (12 grams).
2. Mix 12 grams of Shuddha Svarna pieces and 12 grams of Shuddha Parada in a mortar. Grind firmly for two days until a pishti or buttery paste forms.
3. Mix in the remaining shuddha parada and continue grinding.
4. Add finely powdered Shuddha Gandhaka to the paste.
5. Grind for two more days to make a fine black mixture (Kajjali).
6. Adding Drava Dravya and triturate until it become dry.
7. Divide of Kajjali into three clay-lined bottles and Seal bottles with corks.
8. Place bottles in a sand bath and fill with sand.
9. Perform worship of Lord Shiva, Parvati, fire, and Rasanakushi.
10. Ignite the fire in the furnace.
11. Start with a mandaagni (low flame), then Madhya agni (medium), and after 5 hours, switch to a tivra agni (high flame).
12. Smoke and blue flames (2 to 4 feet) will emit from the bottles after 5 hours.
13. When flames cease, wait an additional half hour and the bottle's bottom will turn red.
14. Seal the bottle's mouth with a clay cork and cover with a clay cloth.
15. Remove sand up to the bottle's neck and allow cooling overnight.
16. Remove the sandhi bandhana and break the bottle.
17. Collect the reddish substance (Makaradhvaja) from the upper part of the bottle.

Dose: 125 mg.

Anupana: Betel Leaf, Milk, Honey.

Indications: Hriddaurbalya, Aganimandya, Jara, Jvara, Vali Palitya, Vajikaranakara, Rasayana.

PHARMACODYNAMICS

1. **Shuddha Suvarna:** Provides strength, vitality, and longevity. It acts as a potent Rasayana, enhancing overall health and vigor.
2. **Shuddha Parada:** Boosts immunity, improves digestion, and enhances the bioavailability of other ingredients. It is known for its rejuvenating and aphrodisiac properties.
3. **Shuddha Gandhaka:** Possesses antimicrobial, anti-inflammatory, and detoxifying effects. It supports respiratory health, promotes digestion, and purifies the blood.
4. **Karpasa:** Acts as a vehicle for the other ingredients, aiding in their trituration and assimilation.
5. **Kumari:** Known for its cooling and soothing properties. It supports digestive health, boosts immunity, and aids in rejuvenation.

PHARMACOKINETICS

1. **Absorption:** The active components are absorbed through the gastrointestinal tract, mucous membranes, and skin (if topically applied).
2. **Distribution:** The bioactive compounds are distributed throughout the body via the bloodstream, targeting various organs and tissues.
3. **Metabolism:** The ingredients undergo metabolism primarily in the liver and are converted into metabolites with enhanced bioactivity.
4. **Excretion:** The waste products are eliminated primarily through urine, feces, and sweat.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Standard Manufacturing Process of *Makaradhvaja* prepared by *Svarna Patra – Varkha* and *Bhasma*	Sanjay Khedekar Scholar, Department of Rasashastra and Bhaishajya Kalpana, Institute for Post Graduate Teaching and Research in Ayurveda, Gujarat Ayurved University, Jamnagar, Gujarat, India	In the study, Svarna, Parada, and Gandhaka were mixed in a 1:8:24 ratio and heated for 12 hours with 400 g of Kajjali in a Kacha Kupi 1/3rd full. Different batches of Makaradhvaja were prepared using Svarna Patra, Varkha, and Bhasma due to controversies over Svarna's form. Varkha yielded the highest quality product with 268 ppm gold, compared to Patra (131 ppm) and Bhasma (19 ppm).
2.	A Scientific Review of Gold Containing Herbo-mineral Preparation: Makaradhvaja	Sanjay B. Khedekar, Department of Rasashastra and Bhaishajya Kalpana, SSAM & H, Hirawadi, Nashik, Maharashtra, India	Research affirms Makaradhvaja's safety for therapy. Studies delve into its pharmacology, emphasizing absorption and distribution. Experiments establish its roles as an immunomodulator, antidiabetic, and antioxidant. Clinical trials validate its efficacy, demonstrating renoprotective effects, efficacy in diabetes mellitus treatment, and relief in rheumatoid arthritis symptoms.
3.	Efficacy of Makaradhvaja on Madhumeha (Type 2 Diabetes) – A Review through Ayurvedic Studies	Vaibhav Charde, Department of Rasashastra and Bhaishajya, I.P.G.T. & R.A., Gujarat Ayurved University, Jamnagar-361008, Gujarat, India	DM presents a global health threat with complex metabolic disruptions. Few studies on Makaradhvaja's efficacy in DM exist. This study aims to consolidate these findings. Both TBM and SBM variants show promise, with SBM demonstrating superior outcomes in DM treatment.
4.	Ninety Days Repeated Dose Oral Toxicity Study of *Makaradhvaja* in Wistar Rats	Sachchidanand Upadhyay Department of Pharmacology, Central Ayurveda Research Institute of Drug Development, Kolkata, West Bengal, India	Male and female Wistar rats received Makaradhavaja for ninety days at varying doses. Evaluations included biochemical, hematological changes, necropsy, and histopathological assessments. High-dose group displayed increased kidney weight, unrelated to histopathology or serum biochemistry, deemed non-adverse. NOAEL was determined at 27 mg/kg and NOEL at 13.5 mg/kg.

4.3.c Samirapannaga Rasa

Reference: A.F.I.-I, Kupipakva, 15:8, A.A.G.S. Part - 4, Page 88/1-2

पारदं गन्धकं मल्लं हरितालं मनःशिला।
एतच्चूर्णीकृतं सर्वं मर्दयेच्च दिनत्रयम्।।
काचकूप्यां विनिक्षिप्य वालुकायन्त्रके न्यसेत्।
क्रमाग्निना पचेत् सम्यग्यामष्टेन च मुद्रयेत्।।
स्वाङ्गशीतं समुद्धृत्य नाम्नाऽसौ वातपन्नगः।

(A.A.G.S. Part - 4, Page 88/1-2)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Shuddha Parada	–	1 Part
Shuddha Gandhaka	–	1 Part
Shuddha Malla	–	1 Part
Shuddha Hartala	–	1 Part
Shuddha Manahshila	–	1 Part

Procedure:

1. Mix Shuddha Parada and Shuddha Gandhaka in Khalva Yantra to make Kajjali.
2. Adding remaining drugs one by one and triturate for 3 days.
3. Fill the powdered mixture into a glass bottle (Kachakupi).
4. Cover the bottle with cloth smeared in mud, repeating seven times up to the neck.
5. Place the bottle in a sand bath (Baluka Yantra).
6. Apply slow heat, then moderate, and finally strong heat, gradually increasing the temperature for 8 Yama (24 hrs).
7. After cooling, collect the sublimed product (Samirapannaga Rasa) from the neck of the bottle.

Dose: 62½ to 125 mg.

Anupana: Betel Leaf, Honey.

Indications: Sannipata Roga, Kaphonmada, Kaphajasandhibandha Jvara, Shvasa, Kasa.

PHARMACODYNAMICS

1. **Shuddha Parada**: Possesses antimicrobial, anti-inflammatory, and rejuvenating properties. It enhances metabolism and strengthens the immune system.
2. **Shuddha Gandhaka**: Exhibits antifungal, antibacterial, and antiparasitic effects. It aids in detoxification and promotes skin health.
3. **Shuddha Malla**: Known for its antipyretic and analgesic properties. It helps in reducing fever and alleviating pain.
4. **Shuddha Hartala**: Acts as an expectorant and bronchodilator. It is beneficial in respiratory disorders and promotes lung function.

5. **Shuddha Manahshila**: Possesses carminative and digestive propertiesIt aids in digestion and relieves gastrointestinal discomfort.

PHARMACOKINETICS

1. **Absorption**: The active constituents are absorbed through the gastrointestinal tract and mucous membranes.
2. **Distribution**: The bioactive compounds are distributed throughout the body via the bloodstream, targeting various organs and tissues.
3. **Metabolism**: The ingredients undergo metabolism primarily in the liver, where they are converted into metabolites with enhanced bioactivity.
4. **Excretion**: The waste products are eliminated primarily through urine and feces.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Standard Manufacturing Process of Sameera Pannaga Rasa	Vani Gayathri PA, Department of Rasashastra and Bhaishajyakalpana, Dr. Sarveppalli Radhakrishnan Rajasthan Ayurveda University, Jodhpur, Rajasthan, India	Samira Pannaga Rasa, an example of Talastha Kupipakva Rasayana, involves arsenic and mercurial preparation. Temperature control is crucial during its gradual preparation stages. Following the Rasachandamsu reference, it took 18 hours to complete. The yield was 185.8 gm from 400 g Kajjali, with 66.7% obtained from the bottom of kupi. Samira Pannaga Rasa is indicated in Tamakasvasa, Amavata, and neurological diseases.
2.	Therapeutic Potential of *Sameera pannaga rasa* (An Arsenical Compound Formulation) A Versatile *Kupipakva rasayana*	Dr. Vikas Kumar, Department of Rasa Shastra and Bhaishajya Kalpana, IPGT and RA, GAU, Jamnagar - 361008, Gujarat, India	Samira Pannaga Rasa (SPR), an arsenical compound cited in Rasa Chandamshu, contains Parada (Hg), Gandhaka (S), Somala (As_2O_3), Haratala (As_2S_3), and Manahshila (As_2S_2). Variations exist in ingredients and heating duration across Rasa classics. This study aims to compile research from various Indian centers, databases, and literature to provide concise insights into its pharmaceutical, analytical, pharmacological, and clinical aspects.
3.	Effect of Sameera Pannaga Rasa (Arsenomercurial Formulation) in the Management of Tamaka Shvasa (Bronchial Asthma) —Randomized double blind Clinical Study	Mayur Mashru, Superintendent, Government Ayurved Hospital Popatpura, Godhra, Gujarat, India	In a study, 52 patients received Samira Pannaga Rasa at 30 mg twice daily for 4 weeks along with Nagavallidala. Results showed significant improvement in asthma control, peak expiratory flow rate, and eosinophil count. 33.33% experienced marked improvement, 44.44% moderate, and 20.00% mild. Sameera Pannaga Rasa emerges as an effective treatment for bronchial asthma.
4.	Pharmaceutical Preparation of Sameera Pannaga Rasa under Standard Temperature Conditions	Neelam Choudhary, Rasa Shastra & Bhaishajya Kalpana, Gaur Brahmin Ayurvedic Colleg Rohtak, Haryana, India.	Samira Pannaga Rasa, from rasa classics, targets Tridoshagn, Sandhivata, Unamada, Shvasa, Kasa, Jvara, Pneumonia, etc. Prepared under standard conditions referencing AFI, it maintains specific temperatures and precautions. Resulting in a brick-red product, it yielded 150 g, with 100 g Talastha and 50 g Kanthastha. The preparation emphasizes temperature control.
5.	Pharmaceutico Analytical Standardization and Preclinical Safety evaluation of Herbomineral Formulation (Samira pannaga Rasa) in Rats	Bibhakar Thakur.	The drug, visually greenish-black, was analyzed by Energy-dispersive X-ray, confirming arsenic, sulphur, carbon, and mercury as primary components. Subacute oral toxicity testing on rats (6, 12, and 25 mg/kg BW for 28 days) showed no adverse effects or mortality. Hematological, biochemical parameters, and histopathological examination indicated safety, with only mild changes in intestinal villi at medium to high doses. The formulation is deemed safe at prescribed doses.

4.4 Pottali Rasayana

DEFINITION

The term 'Pottali' appears in classical Ayurvedic texts, primarily referring to the bundling of various herbal drugs in a piece of cloth for therapeutic use, particularly for sedation in various diseases Pottali is a highly potent form of medication that exhibits maximum efficacy in low dosages. Its unique characteristics lie in its specific shape, form, and preparation methods.

HISTORICAL REFERENCES

- **12th Century**: The first reference to the Putapaka Vidhi (method) of Pottali Kalpana is found in the Rasaratnakara.

- **13th Century**: Rasa Prakasha Sudhakara first mentioned the preparation of Pottali by Gandhaka Drava Paka in the context of Vajra Pottali.
- **18th Century**: The Yogaratnakara text mentioned Gandhaka Drava Paka using an iron vessel.

Later texts of the 18th and 19th centuries repeated previously described Pottali Kalpas, with the Rasayana Sangraha introducing five new Pottali preparations.

- **19th and 20th Centuries**: Texts like Bharat Bhaishajya Ratnakara, Rasayoga Sagara, and Siddha Prayoga Sangraha compiled many Pottali Yogas.

Unique Features of Pottali Kalpana

Preparation: Mercury treated with liquid sulphur becomes more therapeutically efficacious, which may have inspired the formulation of Pottali Kalpana.

Administration: Quick in action, requires low doses, and is easy to transport.

Shelf Life: Long shelf life and easy to handle.

Temperature Control: Requires sustained heat patterns and uses sulphur in liquid media to maintain temperatures up to 250°C.

Method of Preparation

1. **Kajjali Preparation:**
   - Prepared using Shodhita Parada and Shodhita Gandhaka.
   - Bhavana is performed using herbal juices like Vatankuru Svarasa or Semala Svarasa.
2. **Filling and Heating:**
   - The Kajjali is placed in a glass bottle (Aatishi Shishi) made with layers of mud and cloth.
   - This is then placed in a Baluka Yantra for heating.
3. **Temperature Patterns:**
   - Mridu Agni (Mild Heat): 120-250°C
   - Madhyama Agni (Moderate Heat): 250-450°C
   - Tivra Agni (Intense Heat): 450-630°C
   - Sulphur bath is used to maintain the required temperature during Pottali Paka.
4. **Sulphur Bath and Paka**
   - The method of sulphur bath for Pottali Paka was first mentioned by the author of Rasa Chintamani in the 14th century.
   - The preparation is done on Mridu Agni, using indirect heat methods like Valuka Yantra and Lavana Yantra.
5. **Current Relevance**
   - Despite its potency and efficacy, the commercial availability of Pottali Kalpana medicines is minimal. The formulation's unique properties and extensive historical background make it a significant but underutilized aspect of Ayurvedic medicine.

4.4.A Hemagarbha Pottali

Reference: A.F.I.-II, Rasayoga, 16:66, Rasamrita Rasavigyaniya

शुद्धसूतं चतुर्भागं द्विभागं गन्धकस्य च।
भागमेकं स्वर्णभस्म त्रिभागं शुल्वभस्म च।।
कुमारीरससंयुक्तं सप्ताहं मर्दयेद् दृढम्।
गुटिकां कारयेत्तस्य शङ्ख्वाकारां भिषग्वरः।।
वस्त्रे किञ्चिद्बलिं दत्वा गुटीं तत्र निधाय च।
मृत्पात्रे गन्धकं दत्त्वा दोलायन्त्रेण तां पचेत्।।
मन्दाग्निना पचेद्यावद् व्योमवर्णं तु गन्धकम्।
किञ्चिच्छ्वेते ततो वस्त्रमपसार्य प्रयत्नतः।
पोट्टली हेमगर्भाख्या सन्निपाते प्रयुज्यते।
आर्द्रकस्वरसे घृष्टा पर्णखण्डरसेऽथवा।।

(Rasamrita Rasavigyaniya 9/218-222)

Ingredients Used

Drug Name	Part Used	Proportion
Shuddha Parada	–	4 Parts
Shuddha Gandhaka	–	2 Parts
Suvarna Bhasma	–	1 Part
Tamra Bhasma	–	3 Parts
Kumari Svarasa	Lf.	Q.S. For Mardana (7 days)

Procedure:

1. Take Shuddha Parada in a Kharala and mix it with Shuddha Gandhaka for the preparation of Kajjali.
2. Continue Mardana until all features of Kajjali are present (i.e., the mixture becomes smooth, fine, black, and lusterless).
3. Stop Mardana when these features are achieved.
4. Add Tamra Bhasma to the mixture.
5. Add Svarna Bhasma afterward.
6. Add Kumari Svarasa to the mixture fordaily Mardana for seven days.
7. After seven days, ensure the paste becomes soft and easily rolls into pill form without sticking to the fingers.
8. Shape the paste into Shikharakara/Pugphalakriti (cone shape with a flat bottom and tapering upwards) using honey.
9. Place the Apakwa Pottali in Shuddha Gandhaka powder over a silk cloth (four folded)
10. Tie the Pottali and hang it in a porcelain glass beaker containing Ashuddha Gandhaka.

11. Keep the setup on a hotplate with a low flame, recording the temperature every 30 minutes to keep Gandhaka in liquid form.
12. The next day, when the temperature of the Pottali reaches room temperature, remove the outer coverings of the Pottali.
13. Take out the Pottali, and scrape off any Gandhaka adhered to the outer surface with a knife.
14. Store in air tight glass container.

Dose: 125 mg

Anupana: Ardraka Svarasa, Parnakhanda Rasa

Indications: Sannipata Jvara.

PHARMACODYNAMICS

1. **Shuddha Parada:** Provides rejuvenating and detoxifying effects, boosts immunity, and promotes overall well-being.
2. **Shuddha Gandhaka:** Exhibits antimicrobial, anti-inflammatory, and antioxidant properties, supporting the body's defense mechanisms.
3. **Suvarna Bhasma:** Known for its anti-inflammatory, immunomodulatory, and cardioprotective effects, enhancing vitality and strength.
4. **Tamra Bhasma:** Possesses anti-inflammatory, antipyretic, and hematinic properties, aiding in the management of various disorders.

PHARMACOKINETICS

1. **Absorption:** The active constituents are absorbed through the gastrointestinal tract and mucous membranes.
2. **Distribution:** The bioactive compounds are distributed throughout the body via the bloodstream, targeting various organs and tissues.
3. **Metabolism:** The ingredients undergo metabolism primarily in the liver, where they are converted into metabolites with enhanced bioactivity.
4. **Excretion:** The waste products are eliminated primarily through urine and feces.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	A Critical Review on Hemagarbha Pottali: An Effective Ayurveda Formulation	Divya Singh, PG Scholar, Dept. of RSBK, National Institute of Ayurveda DE-NOVO, Jaipur, Rajasthan, India	Hemagarbha Pottali Rasa, a potent blend of Parada and other Dhatus, is known for its fast-acting properties and enhanced efficacy due to Agni Samskara. Despite underutilization, its Yogavahi nature enables easy administration and absorption, advocating for wider production and stringent quality control measures in pharmaceutical industries.
2.	Hemagarbha Pottali— The Wonder Drug of Ayurvedic Critical Care	Dr P.V.N.R. Prasad, Ph.D. Scholar, P.G. Dept. of Rasashastra & Bhiashajya Kalpana, Dr. NRS. Govt. Ayurvedic College, Vijayawada, A.P., India.	Hemagarbha Pottali Rasa, effective against Multi Drug Resistant bacteria, holds promise as an Ayurvedic alternative to modern antibiotics. With proper recognition and widespread use, it could be a breakthrough in treating serious conditions, restoring its significance and glory in the medical field.
3.	Role of Hemagarbha Pottali Rasayana Lehana in post COVID-19 Lung fibrosis: A Case Study	Sachinkumar Sahebrao Patil, Department of Kayachikitsa, M.A.M.'s Sumatibhai Shah Ayurved Mahavidyalaya, Malwadi, Hadapsar, Pune - 411028, Maharashtra, India.	Hemagarbha pottali Rasayana, at 125 mg per day in divided doses, effectively complements post-COVID-19 Lung Fibrosis treatment. It alleviates symptoms such as breathlessness, cough, and fever, while reducing signs like elevated Respiratory Rate and crepitations.
4.	Pharmaceutical Study of Hemgarbha Pottali Rasa	Sharma, Ved Bhushan Medical officer, Dept. of Agadtantra, Rishikul Govt. P.G. Ayurveda College, Haridwar, Uttarakhand, India.	Varka or Svarna tantu, certified by gold purity, compact the Pottali. Temperature control alters properties from Guru to Laghu. Indirect, uniform heat gradually processes Pottali, enhancing pharmacological effects. Excessive or direct heat causes melting due to Gandhaka. Pottali Pakacana be determined by Vyomvarna of Gandhaka, burning silk cloth, and distinctive tapping sound on mud pot, aided by porous silk cloth to prevent Gandhaka adhesion.

Multiple Choice Questions

1. **Which of the following is NOT a therapeutic indication of Arogyavarddhini Gutika?**
   a. Chronic Fever (Jirnajvara)
   b. Skin Disorders (Kushtha)
   c. Respiratory Infections
   d. Liver Disorders (Yakrit Vikara)

2. **What is the primary pharmacodynamic property of Arogyavarddhini Gutika?**
   a. Antibacterial
   b. Detoxification and Purification
   c. Antihistaminic
   d. Anticoagulant

3. **Which of the following is NOT a component of Arogyavarddhini Gutika?**
   a. Haritaki
   b. Shuddha Parada
   c. Ginger (Ardaraka)
   d. Katuki

4. **What is the recommended dose range for Arogyavarddhini Gutika?**
   a. 100-250 mg
   b. 500-750 mg
   c. 250-500 mg
   d. 1000-1500 mg

5. **Which part of the Nimba tree is used in the preparation of Arogyavarddhini Gutika for the process of Mardana?**
   a. Bark
   b. Flowers
   c. Leaves
   d. Fruits

6. **What is the primary function of Eranda and Katuki roots in Arogyavarddhini Gutika?**
   a. Anti-inflammatory
   b. Liver detoxification
   c. Metabolic regulation
   d. Enhancing immune response

7. **Which of the following is NOT listed as an indication for Kumara Kalyana Rasa?**
   a. Jaundice (Kamala)
   b. Diabetes (Prameha)
   c. Cough (Kasa)
   d. Breathlessness (Shvasa)

8. **What is the primary pharmacodynamic property of Kumara Kalyana Rasa?**
   a. Antipyretic and Immunomodulatory
   b. Anticoagulant
   c. Diuretic
   d. Hypoglycemic

9. **Which component of Kumara Kalyana Rasa contributes to its hepatoprotective properties?**
   a. Mauktika Bhasma
   b. Abhraka
   c. Kumari Rasa
   d. Hema Bhasma

10. **What is the recommended dose range for Garbhapala Rasa?**
    a. 50-100 mg
    b. 250-500 mg
    c. 125-250 mg
    d. 500-750 mg

11. **What is the primary anupana (vehicle for administration) recommended for Garbhapala Rasa?**
    a. Ardaraka Svarasa (Ginger Juice)
    b. Draksha Jala (Water decoction of grapes)
    c. Nimba Svarasa (Neem Juice)
    d. Honey

12. **Which of the following conditions is NOT listed as an indication for Garbhapala Rasa?**
    a. Headaches (Siro Roga)
    b. Nausea and Vomiting (Chardi)
    c. Diabetes (Prameha)
    d. Abdominal Pain (Shula)

13. **Which of the following is NOT an ingredient used in Chandraprabha Vati?**
    a. Bibhitaki
    b. Guggulu
    c. Brahmi
    d. Haritaki

14. **What is the recommended dose range for Chandraprabha Vati?**
    a. 100-250 mg
    b. 250-500 mg
    c. 500-750 mg
    d. 750-1000 mg

15. **Which of the following is NOT listed as an indication for Chandraprabha Vati?**
    a. Anaemia (Pandu)
    b. Heart Disease (Hridroga)
    c. Urinary Calculi (Mutrakrichchhra)
    d. Weakness (Daurbalya)

16. **Which of the following is NOT an ingredient used in Pravala Panchamrita Rasa?**
    a. Pravala Bhasma
    b. Shankha Bhasma
    c. Vanga Bhasma
    d. Kapardika Bhasma

17. **What is the recommended dose of Pravala Panchamrita Rasa?**
    a. 125 mg
    b. 250 mg
    c. 500 mg
    d. 750 mg

18. **Which of the following conditions is NOT listed as an indication for Pravala Panchamrita Rasa?**
    a. Dysentery (Atisara)
    b. Heart Disease (Hridroga)
    c. Anaemia (Pandu)
    d. Respiratory Disorders (Kasa, Shvasa)

19. **Which of the following is NOT an ingredient used in Anandabhairava Rasa?**
    a. Shuddha Hingula
    b. Shuddha Vatsana-bha
    c. Shuddha Lauha
    d. Shunthi
20. **What is the recommended dose of Anandabhairava Rasa?**
    a. 125 mg
    b. 250 mg
    c. 500 mg
    d. 750 mg
21. **Which of the following conditions is NOT listed as an indication for Anandabhairava Rasa?**
    a. Joint Disorders (Amavata)
    b. Kidney Stones (Ashmari)
    c. Diabetes (Prameha)
    d. Jaundice (Kamala)
22. **Which of the following is NOT an ingredient used in Yogendra Rasa?**
    a. Svarna Bhasma
    b. Shuddha Vatsana-bha
    c. Rasa Sindura
    d. Mukta Bhasma
23. **What is the recommended dose of Yogendra Rasa?**
    a. 125 mg
    b. 250 mg
    c. 500 mg
    d. 750 mg
24. **Which of the following conditions is NOT listed as an indication for Yogendra Rasa?**
    a. Insomnia (Unmada)
    b. Hemorrhoids (Arsha)
    c. Jaundice (Kamala)
    d. Epilepsy (Apasmara)
25. **Which of the following is NOT an ingredient used in Lakshmivilasa Rasa?**
    a. Shuddha Gandhaka
    b. Karpura
    c. Atibala Root
    d. Shuddha Parada
26. **What is the recommended dose of Laxmivilas Rasa?**
    a. 125 mg
    b. 250 mg
    c. 500 mg
    d. 750 mg
27. **Which of the following conditions is NOT listed as an indication for Lakshmivilasa Rasa?**
    a. Kustha (Leucoderma)
    b. Prameha (Diabetes)
    c. Vata Roga (Diseases due to Vata Dosha)
    d. Shula (Colic)
28. **Which of the following is NOT an ingredient used in Vasantakusumakara Rasa?**
    a. Rajata Bhasma
    b. Naga Bhasma
    c. Lauha Bhasma
    d. Tamra Bhasma
29. **What is the recommended dose range of Vasantakusumakara Rasa?**
    a. 100-200 mg
    b. 200-300 mg
    c. 300-400 mg
    d. 400-500 mg
30. **Which of the following conditions is NOT listed as an indication for Vasantakusumakara Rasa?**
    a. Kshaya (Consumption)
    b. Jvara (Fever)
    c. Smriti Bhramsa (Memory Loss)
    d. Karshya (Emaciation)
31. **Which of the following is NOT an indication for Vasantamalti Rasa?**
    a. Kasa (Cough)
    b. Jvara (Fever)
    c. Netra Roga (Eye Disorders)
    d. Shotha (Inflammation)
32. **What is the primary pharmacodynamic property of Vasantamalati Rasa?**
    a. Antihypertensive
    b. Antipyretic
    c. Anticoagulant
    d. Antidepressant
33. **How is Vasantamalati Rasa administered?**
    a. With water
    b. With milk
    c. With ghee
    d. With honey
34. **Which of the following is NOT an indication for Brihat Vata Chintamani Rasa?**
    a. Vata Pittaja Roga
    b. Bhrama
    c. Pralapa
    d. Kasa (Cough)
35. **What is the primary pharmacodynamic property of Brihat Vata Chintamani Rasa?**
    a. Antipyretic
    b. Antidiabetic
    c. Nervine Tonic
    d. Antihistaminic
36. **How is Brihat Vata Chintamani Rasa administered?**
    a. With water
    b. With milk
    c. With ghee
    d. With Guduchi Svarasa, Aja Kshira, Brahmi Svarasa, Tambula Svarasa, Shankhapushpi Svarasa, Honey
37. **Which of the following is NOT an indication for Shankha Vati?**
    a. Agnimandya
    b. Arocaka
    c. Vibandha (Constipation)
    d. Kshaya
38. **What is the primary ingredient responsible for the antacid property of Shankha Vati?**
    a. Chincha Kshara
    b. Pancha Lavana
    c. Shankha Bhasma
    d. Nimbu Svarasa

39. How is Shankha Vati administered?
a. With water
b. With milk
c. With honey, warm water, buttermilk
d. With ghee

40. What is the primary indication for Shvaskuthara Rasa?
a. Agnimandya
b. Prameha
c. Shvasa
d. Netra Roga

41. Which ingredient in Shvasakuthara Rasa helps in liquefying mucus and easing respiratory conditions?
a. Shuddha Rasa
b. Shuddha Manah-shila
c. Shuddha Tankana
d. Shunthi

42. How is Shvaskutahara Rasa administered?
a. With honey
b. With milk
c. With water
d. With ghee

43. Which of the following is NOT an indication for Kamadudha Rasa?
a. Pittavikara
b. Daha
c. Kasa
d. Murchchha

44. What is the primary function of Shankha Bhasma in Kamadugdha Rasa?
a. Enhancing digestion
b. Balancing Pitta dosha
c. Providing calcium
d. Improving immunity

45. How is Kamadudha Rasa administered?
a. With honey
b. With milk
c. With water
d. With ghee

46. Which of the following is NOT an indication for Sutashekhara Rasa?
a. Gulma
b. Mandagni
c. Vataja atisara
d. Hikka

47. What is the primary function of Shunthi and Maricha in Sutashekhar Rasa?
a. Providing calcium
b. Balancing Vata dosha
c. Enhancing digestion
d. Improving immu-nity

48. How is Sutashekhara Rasa administered?
a. With milk
b. With water
c. With ghee
d. With honey

49. Which of the following is NOT an indication for Navayasa Loha?
a. Kushtha
b. Pandu
c. Agnimandya
d. Kamala

50. What is the primary function of Lauha Bhasma in Navayasa Loha?
a. Enhancing digestion
b. Treating skin diseases
c. Providing iron supplementation
d. Balancing Pitta dosha

51. Which ingredient is NOT included in Navayasa Laccha?
a. Shunthi
b. Bibhitaki
c. Musta
d. Yashtimadhu

52. What is the primary indication for Ichchhabhedi Rasa?
a. Prameha
b. Anaha
c. Jvara
d. Sandhivata

53. Which of the following ingredients is NOT included in Ichchhabhedi Rasa?
a. Maricha
b. Shuddha Parada
c. Shuddha Vatsana-bha
d. Shuddha Gandhaka

54. How should Ichchhabhedi Rasa be administered?
a. With honey
b. With milk
c. With warm water
d. With ghee

55. Which of the following is NOT an ingredient in Krimikuthara Rasa?
a. Karpura
b. Indrayava
c. Shuddha Gandhaka
d. Ajamoda

56. What is the primary indication for Krimikuthara Rasa?
a. Pandu
b. Vatarakta
c. Krimi Roga
d. Arsha

57. How should Krimikuthara Rasa be administered?
a. With milk
b. With kvatha
c. With ghee
d. With honey

58. Which of the following is NOT an ingredient in Panchamrita Parpati?
a. Shuddha Gandhaka
b. Shuddha Parada
c. Shuddha Vatsanabha
d. Lauha Bhasma

59. What is the primary indication for Panchamrita Parpati?
a. Pandu
b. Kasa
c. Grahani
d. Atisara

60. How should Panchamrita Parpati be administered?
a. With milk
b. With water
c. With honey
d. With kvatha

61. Which of the following is NOT an indication for Bola Parpati?
a. Raktapradara
b. Raktapitta
c. Vataja Roga
d. Raktarsa

62. Which of the following formulations is indicated for Hriddaurbalya, Agnimandya, Jara, and Rasayana?
a. Svarna Vanga

b. Makaradhvaja
c. Bola Parpati
d. Sameera Pannaga Rasa

63. What is the primary indication of Sameerapannaga Rasa?

a. Pandu
b. Jirna Kasa
c. Sannipata Roga
d. Arsha

64. What is the primary indication for Hemagarbha Pottali?

a. Pandu
b. Kamala
c. Sannipata Jvara
d. Kushtha

65. Which ingredient in Hemagarbha Pottali provides rejuvenating and detoxifying effects?

a. Shuddha Parada
b. Shuddha Gandhaka
c. Suwarna Bhasma
d. Tamra Bhasma

66. Which metal bhasma is present in the lowest proportion in Hemagarbha Pottali?

a. Suvarna Bhasma
b. Tamra Bhasma
c. Shuddha Parada
d. Shuddha Gandhaka

67. What is the recommended anupana (accompanying substance) for Hemagarbha Pottali?

a. Milk
b. Honey
c. Ardaraka Svarasa
d. Parnakhanda Rasa

ANSWERS KEYS

1.	c	2.	b	3.	c	4.	c	5.	c
6.	c	7.	b	8.	a	9.	b	10.	c
11.	b	12.	c	13.	c	14.	b	15.	b
16.	c	17.	b	18.	b	19.	c	20.	b
21.	d	22.	b	23.	b	24.	c	25.	b
26.	b	27.	d	28.	d	29.	b	30.	b
31.	c	32.	b	33.	d	34.	d	35.	c
36.	d	37.	c	38.	c	39.	c	40.	c
41.	c	42.	a	43.	b	44.	c	45.	a
46.	b	47.	c	48.	d	49.	a	50.	c
51.	d	52.	c	53.	c	54.	c	55.	c
56.	c	57.	b	58.	c	59.	c	60.	c
61.	c	62.	b	63.	c	64.	c	65.	a
66.	a	67.	c						

Short Answer Questions (SAQ)

- Short note on Arogyavardhini vati
- Ingridents of Navayasa Loha
- Probable Mode of Action of Shvasakuthara Rasa
- Panchamrita Vati

Long Answer Questions (SAQ)

- Describe Kupipakva Kalpana and write in detail Sameera Pannaga Rasa.
- Describle types and importance of Potalli Kalapna and write Hemagarbha Pottali.
- Write the ingridents, Matra, probable mode of action of Chandraprabha vati and its research updates.

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CHAPTER 5

AUSHADHI KALPA - II (COMPOUND DRUGS/FORMULATIONS)

5.1 Dashamoola Kvatha

Reference: AFI, Part I, Page 55

पार्श्वशूले ज्वरे श्वासे कासे श्लेष्मसमुद्भवे।
पिप्पलीचूर्णसंयुक्तं दशमूलीरसं पिबेत्।।
पौष्करं कट्फलं भार्ङ्गीं विश्वपिप्पलिसाधितम्।
पिबेत्क्वाथं कफोद्रेके कासे श्वासे च हृद्ग्रहे।।
पञ्चकोलैः श्रृतं क्षीरं कफघ्नं लघु शस्यते।
श्वासकासज्वरहरं बलवर्णाग्निवर्द्धनम्।। (B.R., Kasa., 15/13-15)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Shalaparni	Pl.	1 Part
Prishniparni	Pl.	1 Part
Brihati	Pl.	1 Part
Kantakari	Pl.	1 Part
Gokshura	Pl.	1 Part
Bilava	Rt./St.Bk.	1 Part
Agnimantha	Rt./St.Bk.	1 Part
Shyonaka	Rt./St.Bk.	1 Part
Gambhari	Rt./St.Bk.	1 Part
Patala	Rt./St.Bk.	1 Part

Procedure:

1. Obtain the necessary all the ingredients required for Dashamula Kvatha. Ensure each ingredient is dried and cleaned properly.
2. Grind each ingredient separately into a coarse powder.
3. Mix all the coarse powders properly in a clean, dry container.
4. Add eight times the amount of water to the mixture of coarse powders.
5. Allow the mixture to soak in the water overnight.
6. The next morning, subject the mixture to mild heat. Continue heating until the liquid reduces to 1/8th of its original quantity.
7. Once reduced, filter the mixture through a clean cloth to remove the solid residues.
8. Collect the filtrate in a clean container. This filtrate is known as Dashamula Kvatha.

Dose: 48 gms.

Prakshepa Dravya: Pippali Churna.

Indications: Parshva Shula, Jvara, Shvasa, Kaphaja Kasa.

PHARMACODYNAMICS

1. **Anti-inflammatory**: The components of Dashamula Kvatha, particularly those like Gokshura and Bilva, possess anti-inflammatory properties, reducing inflammation in conditions such as Parshva Shula (pain in the flanks) and Jvara (fever).
2. **Expectorant and Bronchodilator**: Herbs like Kanthakari and Brihati help in clearing mucus from the respiratory tract and dilate the bronchial passages, making it effective in treating conditions like Shvasa (dyspnea) and Kaphaja Kasa (cough with phlegm).
3. **Antipyretic**: The formulation has ingredients like Agnimantha and Patala which help in reducing fever.
4. **Analgesic**: Shalaparni and Prishniparni have analgesic properties, helping in alleviating pain.
5. **Immunomodulatory**: Many components of Dashamula, particularly those with Rasayana (rejuvenating) properties, enhance the body's immune response.

PHARMACOKINETICS

1. **Absorption**: Dashamula Kvatha, being a decoction, is typically absorbed through the gastrointestinal tract. The presence of Pippali Churna enhances its absorption and bioavailability due to its bio-enhancing properties.
2. **Distribution**: Once absorbed, the active constituents are distributed via the bloodstream to various

tissues. The lipophilic (fat-loving) nature of some constituents aids in their distribution to lipid-rich tissues.

3. **Metabolism**: The herbal components undergo metabolism primarily in the liver. Enzymatic actions, including those involving cytochrome P enzymes, break down the active compounds into metabolites.
4. **Excretion**: The metabolites of Dashamula Kvatha are excreted through the kidneys (urine) and, to a lesser extent, through the feces. Some volatile components might be excreted via the lungs.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Comparative Study of Dashamula Kvatha and Dashamularishta with Special Reference to their Method of Preparation and Uses	BSMM Sooriyaarachchi, P.G. Scholar, Institute for Post Graduate Teaching and Research in Ayurveda, Gujarat Ayurved University, Jamnagar, Gujarat, India	Dashamularishta surpasses Dashamula Kvatha in efficacy across various conditions due to its heightened activity in the body and prolonged therapeutic effects, simplifying treatment for patients. Additionally, it offers a broader range of therapeutic actions compared to Dashamula Kvatha.
2.	A Critical Review on Different Dashamuladi Kvatha Yoga	Neha Parmar, Ph.D. Scholar, Department of Dravyaguna, I.P.G.T. & R.A., Gujarat Ayurveda University, Jamnagar, Gujarat, India	This review assessed Dashamula Kvatha formulations, including those with added Prakshep dravya, from classical texts Dashamula kvatha demonstrated effectiveness for various conditions. Adding extra dravyas expanded its efficacy and application spectrum.
3.	Standardization of Dasha-mula Kvatha Churna: A Herbal Compound Drug Used For Parisheka in Spastic Cerebral Palsy	GR Arun Raj Department of Kaumarabhritya, Sri Dharmasthala Manjunatheshwara College of Ayurveda and Hospital, Hassan, Karnataka, India.	Standardization of Dashamula Kvatha Churna was conducted through physicochemical studies following WHO guidelines, Indian Pharmacopoeia, and Ayurvedic Pharmacopoeia. These tests authenticated and ensured the quality of the formulation.
4.	Dashamula Kvatha Dhara Sveda in Knee Injuries – A Review	Dr. Manmeet Kaur, P.G. Scholar, Department of Panchakarma, Dr D.Y. Patil College of Ayurved and Research Centre, Dr D.Y. Patil Vidyapeeth (Deemed to be University) Sant Tukaram Nagar, Pimpri, Pune , Maharashtra, India.	This review examines Kvatha Dhara Sveda, where Dashamula Kvatha is applied directly to the affected area either alone or alongside modern therapies Dashamula Kvatha, a combination of ten drugs, proves effective in reducing inflammation, alleviating pain, and enhancing muscle tone.

5.2 Mahamanjishthadi Kvatha

Reference: AFI, Part I, page 59

मञ्जिष्ठामुस्तकुटजगुडूचीकुष्ठनागरैः।।
भार्ङ्गीक्षुद्रावचानिम्बनिशाद्वयफलत्रिकैः।
पटोलकटुकीमूर्वाविडङ्गासनचित्रकैः।।
शतावरीत्रायमाणाकृष्णेन्द्रयववासकैः।
भृङ्गराजमहादारुपाठाखदिरचन्दनैः।।
त्रिवृद्वरुणकैरातबाकुचीकृतमालकैः।
शाखोटकमहानिम्बकरञ्जातिविषाजलैः।।
इन्द्रवारुणिकानन्तासारिवापर्पटैः समैः।
एभिः कृतं पिबेत् क्वाथं कणागुग्गुलुसंयुतम्।।
अष्टादशसु कुष्ठेषु वातरक्तार्दिते तथा।
उपदंशे श्लीपदे च प्रसुप्तौ पक्षघातके।।
मेदोदोषे नेत्ररोगे मञ्जिष्ठादिः प्रशस्यते।

(Sha. S.M. Kha., 2/137-142½)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Manjishtha	Rt.	1 Part
Musta	Rz.	1 Part
Kutaja	St. Bk.	1 Part
Guduchi	St.	1 Part
Kushtha	R.t	1 Part
Nagara	Rz.	1 Part
Bharangi	Rt.	1 Part
Kantakari	Pl.	1 Part
Vacha	Rz.	1 Part
Nimba	St. Bk.	1 Part
Haridra	Rz.	1 Part
Daruharidra	St.	1 Part
Haritaki	P.	1 Part
Bibhitaki	P.	1 Part
Amalaki	P.	1 Part
Patola	Pl.	1 Part
Katuka	Rz.	1 Part
Murva	Rt.	1 Part
Vidanga	Fr.	1 Part
Asana	Ht. Wd.	1 Part
Chitraka	Rt.	1 Part
Shatavari	Rt. Tr.	1 Part
Traymana	Pl.	1 Part

Drug Name	Part Used	Proportion
Pippali	Fr.	1 Part
Kutaja	Sd.	1 Part
Vasa	Rt.	1 Part
Bhringaraja	Pl.	1 Part
Devadaru	Ht. Wd.	1 Part
Patha	Rt.	1 Part
Khadira	Ht. Wd.	1 Part
Shveta Chandana	Ht. Wd.	1 Part
Trivrti	Rt.	1 Part
Varuna	St. Bk.	1 Part
Kiratatikta	Pl.	1 Part
Bakuchi	Sd	1 Part
Aragavadha	Fr.	1 Part
Sakhotaka	St. Bk.	1 Part
Maha Nimba	St. Bk.	1 Part
Karanja	St. Bk.	1 Part
Ativisha	Rt.	1 Part
Hrivera	Rt.	1 Part
Indravaruni	Rt.	1 Part
Shvetasariva	Rt.	1 Part
Krishna sariva	Rt.	1 Part
Parpata	Pl.	1 Part

Procedure:

1. Obtain the necessary herbs and ingredients required for Mahamanjishthadi Kvatha. Ensure each ingredient is dried and cleaned properly.
2. Grind each ingredient separately into a coarse powder.
3. Mix all the coarse powders properly in a clean, dry container.
4. Add sixteen times the amount of water to the mixture of coarse powders.
5. Allow the mixture to soak in the water overnight.
6. The next morning, subject the mixture to mild heat. Continue heating until the liquid reduces to 1/8th of its original quantity.
7. Once reduced, filter the mixture through a clean cloth to remove the solid residues.
8. Collect the filtrate in a clean container. This filtrate is known as Mahamanjishthadi Kvatha.

Dose: 48 gms.

Indications: Vatarakta, Kushtha Upadamsha, Shlipada, Ardita, Pakshaghata, Medodosha, Netra Roga.

PHARMACODYNAMICS

1. **Anti-inflammatory**: Many ingredients such as Manjishtha, Guduchi, and Haridra possess strong anti-inflammatory properties, which help reduce inflammation in conditions like Vatarakta (gout) and Kushtha (skin diseases).
2. **Immunomodulatory**: Herbs like Guduchi and Amalaki are known to boost the immune system, helping the body fight against infections and autoimmune conditions.
3. **Blood Purification**: Manjishtha, Nimba, and Khadira are traditional blood purifiers, helping to cleanse the blood of toxins and improve skin conditions.
4. **Antioxidant**: Several ingredients, including Amalaki and Guduchi, have antioxidant properties, which help in neutralizing free radicals and protecting tissues from oxidative damage.
5. **Analgesic**: The formulation provides pain relief due to the presence of anti-inflammatory and analgesic herbs such as Devadaru and Kantakari.
6. **Antimicrobial**: Ingredients like Haridra and Kutaja possess antimicrobial properties, which are effective against various pathogens causing skin diseases and other infections.

PHARMACOKINETICS

1. **Absorption**: The decoction is absorbed through the gastrointestinal tract. The presence of bio-enhancing herbs such as Pippali enhances the absorption and bioavailability of the active components.
2. **Distribution**: After absorption, the active constituents are distributed throughout the body via the bloodstream. Lipophilic constituents can easily penetrate lipid-rich tissues.
3. **Metabolism**: The ingredients undergo metabolism primarily in the liver, where they are broken down into their active metabolites by hepatic enzymes, including cytochrome P enzymes.
4. **Excretion**: The metabolites are excreted primarily through the kidneys (urine), and some components might be excreted via the feces. Volatile components might also be excreted through the lungs.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Physico-chemical Character-ization and Antimicrobial Properties of Maha-manjishthadi Kadha: An Ayurvedic Formulation	Kapil Thakur, MGM School of Biomedi-cal Sciences, MGMIHS, Kamothe-410206, Navi Mumbai, Maharashtra, India.	This study aimed to stan-dardize Mahamanjisthadi kadha and evaluate its antimicrobial properties against skin infection pathogens. Physico-chemical analysis covered organoleptic tests, pH, alcohol content, Brix, and specific gravity Phy-tochemical screening as-sessed bioactive com-

Sr.No.	Article Name	Author Name	Result
			pounds, while contaminants like heavy metals, aflatoxins, and microbial load were examined HPTLC estimated lupeol, ellagic acid, and gallic acid Antimicrobial activity against five pathogens was determined via the well-diffusion method.

5.3 Pushyanuga Churna

Reference: AFI, Part I, Page 113, Bhaishajyaratnavali, Strirogadhikara

पाठाजम्ब्वाम्रयोर्मध्यं शिलाभेदं रसाञ्जनम्।
अम्बष्ठकी मोचरसः समङ्गा पद्मकेशरम्।।
वाह्लीकातिविषा मुस्तं बिल्वं लोध्रं सगैरिकम्।
त्रिफलां मरिचं शुण्ठी मृद्वीका रक्तचन्दनम्।।
कट्वङ्गवत्सकानन्ता धातकी मधुकार्जुनम्।
पुष्येणोद्धृत्य तुल्यानि श्लक्ष्णचूर्णानि कारयेत्।।
तानि क्षौद्रेण संयोज्य पाययेत्तण्डुलाम्बुना।
असृग्दरातिसारेषु रक्तं यच्चोपवेश्यते।।
दोषागन्तुकृता ये च बालानां तांश्च नाशयेत्।
योनिदोषं रजोदोषं श्वेतं नीलं सपीतकम्।।
स्त्रीणां श्यावारुणं तच्च तत्प्रसह्य निवर्त्तयेत्।
चूर्णं पुष्यानुगं नाम हितमात्रेयपूजितम्।
अम्बष्ठा दक्षिणेख्याता गृहणन्त्यन्ये तु लक्ष्मणाम्।।

(B.R. Pradararogadhikara, 66/25-30)

Ingredients Used

Ingridents	Part Used	Amount
Patha	(Rt.)	1 Part
Jambu-Bija majja	(Enm.)	1 Part
Amra-bija majja	(Enm.)	1 Part
Pashanabheda	(Rz.)	1 Part
Daruharidra	(St.Ext.)	1 Part
Ambastaki	(Rt.)	1 Part
Mocharasa	(Exd.)	1 Part
Lajjalu	(Rt.)	1 Part
Kamala	(Adr.)	1 Part
Kamkuma	(Stl/Stg.)	1 Part
Ativisha	(Rt.)	1 Part
Musta	(Rz.)	1 Part
Bilva	(St.Bk.)	1 Part
Lodhra	(St.Bk.)	1 Part
Gairika	–	1 Part
Katphala	(St.Bk.)	1 Part
Maricha	(Fr.)	1 Part
Shunthi	(Rz.)	1 Part
Mridvika	(DrFr.)	1 Part
Rakta Chandana	(Hd.Wd.)	1 Part
Katvanga	(St.Bk.)	1 Part
Kutaja	(St.Bk.)	1 Part
Shvetasariva	(Rt.)	1 Part
Dhataki	(Fl.)	1 Part
Yashti	(Rt.)	1 Part
Arjuna	(St.Bk.)	1 Part

Procedure:

1. Gather all the required dried ingredients for Pushyanuga Churna. Ensure each ingredient is clean and free from impurities.
2. Using a Khalva Yantra or a grinder, grind each ingredient separately into a fine powder.
3. Filter each powdered ingredient through a clean cloth to remove any coarse particles.
4. Combine all the filtered powders together in a clean, dry container. Mix thoroughly to ensure a uniform blend of all ingredients.
5. Filter the compound powder mixture once again through a clean cloth to ensure a fine consistency.
6. Store the final compound powder in sterilized, airtight glass containers to preserve its potency and freshness.
7. Label the containers with the name Pushyanuga Churna and the preparation date.

Dose: 1 to 3 gms.

Anupana: Honey, Tandulodaka.

Indications: Asrigdara, Shveta Pradara, Rajodosha, Arsha, Yonidosha.

Pharmacodynamics

1. **Hemostatic:** Herbs like Lodhra and Patha have hemostatic properties, helping to reduce excessive bleeding, which is beneficial in conditions like Asrigdara (excessive menstrual bleeding).
2. **Astringent:** Ingredients such as Amra-bija and Jambu-bija provide astringent action, which helps in tightening tissues and reducing discharge in conditions like Shveta Pradara (leucorrhea).
3. **Anti-inflammatory:** Herbs like Daruharidra and Pasanabheda reduce inflammation, making the formulation useful in treating inflammation-related disorders.
4. **Antimicrobial:** Components like Maricha (black pepper) and Shunthi (dry ginger) possess antimicrobial properties, which help in combating infections.
5. **Analgesic:** Ingredients such as Musta and Rakta Chandana provide pain relief.

6. **Uterine Tonic**: Many herbs in the formulation act as uterine tonics, supporting reproductive health and normalizing menstrual cycles.

PHARMACOKINETICS

1. **Absorption**: The powdered form of Pushyanuga Churna is typically taken with honey or tandulodaka (rice water), which aids in its absorption through the gastrointestinal tract. The fine particles ensure a larger surface area for better absorption.
2. **Distribution**: After absorption, the active constituents are distributed throughout the body via the bloodstream, targeting reproductive organs and other affected tissues.
3. **Metabolism**: The herbal components undergo metabolism primarily in the liver, where they are broken down into active metabolites by hepatic enzymes.
4. **Excretion**: The metabolites are excreted primarily through the kidneys (urine), and some components might be excreted via the feces.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	A Critical Review on Pushyanuga Churna: An Ayurvedic Polyherbal Formulation	Vatsala Jain, PG Scholar; National Institute of Ayurveda, Jaipur, Rajasthan, India	The present study highlights minimal variations in the ingredients, uses, and Anupan of Pushyanuga Churna. Various texts consistently recommend its use for diverse bleeding disorders, including metrorrhagia and menorrhagia. Additionally, it is applicable in cases of diarrhea, dysentery, bleeding piles, and similar conditions in children.
2.	A Review Study of Effect of Pushyanug Churna in Shveta Pradara	Priyanka Salve, PG Scholar, Department of Rognidan Avum Vikriti Vigyan, D.M.MAyurvedCollege, Arni Road, Yavatmal, Maharashtra, India.	Pushyanuga Churna, praised by Maharshi Atreya, comprises dravyas with Tridosh Nashak properties. This study explores its effectiveness in treating Shveta Pradara, gathering material from ancient Ayurvedic texts, journals, and websites. Results show its significant efficacy in addressing Shveta Pradara.

5.4 Sudarshana Churna

Reference: AFI, Part I, Page 116

Bhaishajyaratnavali, Jvararogadhikara

कालीयकन्तु रजनी देवदारु वचा घनम्।
अभया धन्वयासश्च शृङ्गी क्षुदा महौषधम्।।
त्रायन्ती पर्पटं निम्बं ग्रन्थिकं बालकं शटी।
पौष्करं मागधी मूर्वा कुटजं मधुयष्टिका।।
शिग्रूद्भवं सेन्द्रयवं वरी दार्वी कुचन्दनम्।
पद्मकं सरलोशीरं त्वचं सौराष्ट्रिका स्थिरा।।
यमान्यतिविषा बिल्वं मरिचं गन्धपत्रकम्।
धात्री गुडूची कटुकं सचित्रकपटोलकम्।।
कलसी चैव सर्वाणि समभागानिं कारयेत्।
सर्वद्व्यस्य चार्द्धन्तु कैरातं सम्प्रकल्पयेत्।।
एतत् सुदर्शनं नाम ज्वरान् हन्ति न संशयः।
पृथग्दोषांश्च विविधान् समस्तान् विषमज्वरान्।।
प्राकृतं वैकृतञ्चापि सौम्यं तीक्ष्णमथापि वा।
अन्तर्गतं वहिःस्थञ्च निरामं साममेव च।।
ज्वरमष्टविधं हन्ति साध्यासाध्यमथापि वा।
नानादोषोद्भवञ्चैव वारिदोषभवन्तथा।।
विरुद्धभेषजभवं ज्वरमाशु व्यपोहति।
प्लीहानं यकृतं गुल्मं हन्त्यवश्यं न संशयः।।
यथा सुदर्शनं चक्रं दानवानां निषूदनम्।
तथा ज्वराणां सर्वेषामिदमेव निगद्यते।।

(B.R., Jvara., 5/308-317)

INGREDIENTS USED

Ingridents	Part Used	Amount
Pita chandana	(HtWd.)	1 part
Rajani	(Rz.)	1 part
Devadaru	(HtWd.)	1 part
Vacha	(Rz.)	1 part
Musta	(Rz.)	1 part
Haritaki	(P.)	1 part
Dhanvayasa	(Pl.)	1 part
Karkatshringi	(Gl.)	1 part
Kantakari	(Pl.)	1 part
Shunthi	(Rz.)	1 part
Trayamana	(Pl.)	1 part
Parpata	(Pl.)	1 part
Nimba	(St.Bk.)	1 part
Granthika	(Rt.)	1 part
Hrivera	(Rt.)	1 part
Sati	(Rz.)	1 part
Pushkara	(Rt.)	1 part
Pippali	(Fr.)	1 part
Murva	(Rt.)	1 part
Kutaja	(St.Bk.)	1 part
Yashti	(Rt.)	1 part
Shigru	(Sd.)	1 part
Indrayava	(Sd.)	1 part
Shatavari	(Rt.Tr.)	1 part
Daruharidra	(St.)	1 part
Raktachandana	(Ht.Wd.)	1 part

Ingridents	Part Used	Amount
Padmaka	(Ht.Wd.)	1 part
Sarala	(HtWd.)	1 part
Ushira	(Rt.)	1 part
Tvak	(St.Bk.)	1 part
Saurashtri	–	1 part
Shalaparni	(Pl.)	1 part
Yavani	(Fr.)	1 part
Ativisha	(Rt.Tr.)	1 part
Bilva	(Rt.)	1 part
Maricha	(Fr.)	1 part
Gandhapatra	(Lf.)	1 part
Dhatri	(Fr.P.)	1 part
Guduchi	(St.)	1 part
Katuka	(Rt.)	1 part
Chitraka	(Rt.)	1 part
Patola	(Pl.)	1 part
Prishniparni	(Pl.)	1 part
Kiratatikta	(Pl.)	1 part

Procedure:

1. Gather all the required dried ingredients for Sudarshana Churna. Ensure each ingredient is clean and free from impurities.
2. Using a Khalva Yantra or a grinder, grind each ingredient separately into a fine powder.
3. Filter each powdered ingredient through a clean cloth to remove any coarse particles.
4. Combine all the filtered powders together in a clean, dry container. Mix thoroughly to ensure a uniform blend of all ingredients.
5. Filter the compound powder mixture once again through a clean cloth to ensure a fine consistency.
6. Store the final compound powder in sterilized, airtight glass containers to preserve its potency and freshness.
7. Label the containers with the name Sudarshana Churna and the preparation date.

Dose: 2 to 4 gms.

Anupana: Warm Water.

Indications: Yakritplihavriddhi, Jvara, Vishmajvara, Gulma, Jirnajvara.

PHARMACODYNAMICS

1. **Antipyretic**: Many ingredients such as Rajani (turmeric), Nimba, and Guduchi have strong antipyretic properties, helping to reduce fever.
2. **Anti-inflammatory**: Herbs like Devadaru and Shunthi reduce inflammation, which is beneficial in conditions like Jvara (fever) and inflammatory diseases.
3. **Antimicrobial**: Ingredients such as Nimba and Haritaki possess antimicrobial properties, which help in combating infections that cause fever and other ailments.
4. **Hepatoprotective**: Herbs like Katuka and Kutaja protect the liver, supporting its function and helping in conditions like Yakrit plihavriddhi (enlarged liver and spleen).
5. **Antioxidant**: Several ingredients, including Guduchi and Dhatri (Amla), have antioxidant properties, which help in neutralizing free radicals and protecting tissues from oxidative damage.
6. **Digestive Stimulant**: Ingredients like Vacha and Maricha stimulate digestion, aiding in the management of digestive disorders and improving overall digestion.

PHARMACOKINETICS

1. **Absorption**: The powdered form of Sudarshana Churna is typically taken with warm water, enhancing its absorption through the gastrointestinal tract. The fine particles ensure a larger surface area for better absorption.
2. **Distribution**: After absorption, the active constituents are distributed throughout the body via the bloodstream, targeting various organs, especially the liver and spleen.
3. **Metabolism**: The herbal components undergo metabolism primarily in the liver, where they are broken down into active metabolites by hepatic enzymes, including cytochrome P enzymes.
4. **Excretion**: The metabolites are excreted primarily through the kidneys (urine), and some components might be excreted via the feces. Volatile components might also be excreted through the lungs.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	A Critical Review on Sudarshana Churna	Sheenam Rani, PG Scholar, PG Department of Rasa Shastra & Bhaishajya Kalpana, Uttarakhand Ayurved University, Rishikul Campus, Haridwar, Uttarakhand, India	Sudarshana Churna, containing Swertia chirayita, is a notable Ayurvedic remedy for fevers. Pharmacological studies confirm its efficacy against fever, infections, and other conditions, making it a valuable therapeutic option. This article reviews its Ayurvedic literature and pharmacological studies, underscoring its effectiveness.

Sr.No.	Article Name	Author Name	Result
2.	Evaluation of the *In Vitro* and *In Vivo* Antioxidant Potentials of *Sudarshana* Powder	Weerakoon Achchige Selvi Saroja Weerakoon, Department of Ayurveda Paediatrics, Institute of Indigenous Medicine, University of Colombo, Colombo, Sri Lanka	SP's antioxidant activity was tested in Wistar rats using the LPO assay. In vitro, µg of SP equaled µg of TROLOX, with . ± .% radical inhibitionIn vivo, after days of dosing, SP significantly reduced serum MDA levels compared to controls (p <), indicating potent antioxidant effects.
3.	Pharmacodynamics of Sudarshana Churna	Rajiv Kumar, University of Delhi, Delhi - 110007, India.	This review explores the pharmacodynamics of Such, enhancing potential Ayurvedic medicine applications. It proposes innovative methodologies based on recent research findings and elucidates Such's mode of action according to Ayurvedic principles. The impact on disease control and treatment is discussed, along with the influence of pharmacokinetic and pharmacodynamic factors on medication safety and effectiveness in geriatric patients.
4.	Standardisation of Sudharshana Churna Polyherbal Formulation	J. Karthi, Aadhibhagawan College of Pharmacy, Rantham, Tamilnadu, India	Sudarshana Churna was prepared following the Ayurvedic Formulary of India. Through in-house preparation and standardization of two marketed versions, it was assessed based on organoleptic, physical, and physico-chemical characteristics, as well as preliminary phytochemical analysis. These parameters establish sufficient standards for quality control in pharmaceutical settings.

5.5 Lavana Bhaskara Churna

Reference: AFI, Part I, Page 114, Sharngadharasamhita, Madhyamakhanda

सामुद्रलवणं कार्यमष्टकर्षमितं बुधैः।
पञ्च सौवर्चलं ग्राह्यं विडं सैन्धवधान्यकात्।।
पिप्पली पिप्पलीमूलं कृष्णाजीरकपत्रकम्।
नागकेशरतालीसमम्लवेतसकं तथा।।
द्विकर्षमात्राण्येतानि प्रत्येकं कारयेद् बुधः।
मरिचं जीरकं विश्वमेकैकं कर्षमात्रकम्।।
दाडिमं स्याच्चतुष्कर्ष त्वगेला चार्धकार्षिकी।
एतच्चूर्णीकृतं सर्वं लवणं भास्कराभिधम्।।
शाणप्रमाणं देयं तु मस्तुतक्रसुरासवैः।
वातश्लेष्मभवं गुल्मं प्लीहानमुदरं क्षयम्।।
अर्शांसि ग्रहणीं कुष्ठं विबन्धं च भगन्दरम्।
शोफं शूलं श्वासकासावामवातं च हृद्रुजम्।।
मन्दाग्निं नाशयेदेतद् दीपनं पाचनं परम्।
सर्वलोकहितार्थाय भास्करेणोदितं पुरा।।

(Sha. S.M. Kha., 6/138-144)

Ingredients Used

Ingridents	Part used	Amount
Samudra Lavana	–	16 parts
Sauvarchala Lavana	–	10 parts
Vida Lavana	–	4 parts
Saindhava Lavana	–	4 parts
Dhanyaka	(Fr.)	4 parts
Pippali	(Fr.)	4 parts
Pippali Mula	(Rt.)	4 parts
Krishna Jiraka	(Fr.)	4 parts
Patraka	(Lf.)	4 parts
Nagakesara	(Stmn.)	4 parts
Talisa	(Lf.)	4 parts
Amlavetasa	(Fr.)	4 parts
Maricha	(Fr.)	2 parts
Jiraka	(Fr.)	2 parts
Shunthi	(Rz.)	2 parts
Dadima (Bija)	(Fr.)	8 parts
Tvaka	(St.Bk.)	1 part
Ela	(Sd.)	1 part

Procedure:

1. Gather all the required dried ingredients for Lavana Bhaskara Churna. Ensure each ingredient is clean and free from impurities.
2. Using a Khalva Yantra or a grinder, grind each ingredient separately into a fine powder.
3. Filter each powdered ingredient through a clean cloth to remove any coarse particles.
4. Combine all the filtered powders together in a clean, dry container. Mix thoroughly to ensure a uniform blend of all ingredients.
5. Filter the compound powder mixture once again through a clean cloth to ensure a fine consistency.
6. Store the final compound powder in sterilized, airtight glass containers to preserve its potency and freshness.
7. Label the containers with the name Lavana Bhaskara Churna and the preparation date.

Dose: 3 gms.

Anupana: Mastu, Takra, Warm Water, Asava.

Indications: Agnimandya, Grahani, Vatakaphaja Gulma, Arsha, Pliharoga, Udara Roga, Kshaya, Kushtha, Vibandha, Bhagandara, Sopha, Shula, Shvasa, Kasa, Amavata, Hridruja, Ajirna.

PHARMACODYNAMICS

1. **Digestive Stimulation:** Samudra Lavana, Sauvarchala Lavana, and Saindhava Lavana stimulate digestive enzymes and gastric secretions, enhancing digestion and relieving symptoms of weak digestive fire (Agnimandya).
2. **Carminative and Antispasmodic:** Dhanyaka, Maricha, and Jiraka help in relieving gas and abdominal spasms, reducing bloating and discomfort.
3. **Laxative Effect:** Lavana (salts) act as mild laxatives, promoting bowel movements and relieving constipation (Vibandha).
4. **Hepatoprotective:** Pippali and Amlavetasa support liver function and protect against liver disorders, aiding in detoxification.
5. **Anti-inflammatory:** Nagakesara, Talisa, and Rakta Candana reduce inflammation, helping in conditions like hemorrhoids (Arsha) and skin diseases (Kushtha).
6. **Antimicrobial:** Saindhava Lavana and Shunthi possess antimicrobial properties, helping in treating infections and preventing microbial growth.
7. **Antioxidant:** Ela and Tvaka protect the body from oxidative stress by neutralizing free radicals.
8. **Cardiotonic:** Nagakesara and Dadima support cardiovascular health, improving heart function and reducing cardiac pain (Hridruja).

PHARMACOKINETICS

1. **Absorption:** The powdered form of Lavana Bhaskara Churna, taken with anupana (vehicles like warm water or buttermilk), is quickly absorbed through the gastrointestinal tract, ensuring rapid onset of action.
2. **Distribution:** The active compounds are distributed via the bloodstream to various organs, particularly targeting the digestive system, liver, spleen, and cardiovascular system.
3. **Metabolism:** The components undergo hepatic metabolism, where they are converted into active metabolites. The presence of Pippali enhances the bioavailability of other ingredients, ensuring efficient metabolism.
4. **Excretion:** The metabolites are excreted mainly through urine and feces, ensuring the removal of waste products from the body. Some volatile components may be excreted through the lungs, aiding in respiratory conditions.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Lavana Bhaskara Churna—An Ayurvedic Formulation Used in the Treatment of Gastric Intestinal Disease: A Review	Punam Kumari, MD Scholar, P.G. Department of Rasa Shastra & Bhaishajya Kalpana, Uttarakhand Ayurved University, Rishikul Campus, Haridwar, Uttarakhand, India.	Lavana Bhaskara Churna treats indigestion, flatulency, and stimulates appetiteIts properties include Katu and Tikta Rasa, Laghu, Ruksha, Tikshna Guna, Katu Vipaka, Ushna Virya, and Dipana, Pachana, aiding digestion and detoxificationIt alleviates respiratory and digestive issues and lowers cholesterol and triglycerides. Despite limited research, it's widely used for gastrointestinal conditions, urging further clinical studies for global acceptance.
2.	Efficacy of Lavan Bhaskar Churna—Critical Review	Monoj Dash	Lavanabhaskara Churna is a versatile Ayurvedic remedy used for gastrointestinal issues such as digestive problems, malabsorption syndrome, abdominal disorders, hemorrhoids, constipation, colicky pain, and more.
3.	Standardization and Estimation of Sodium and Potassium of Marketed Lavana Bhasker Churna	Deepak Kumar Hati, Assistant Professor, Institute of Pharmacy and Technology, Salipur, Odisha, India	The study aimed to prepare and standardize Bhaskara Lavana Churna, an Ayurvedic formulation used for various ailments. Parameters such as physicochemical properties, phytochemical screening, and Na^+ and K^+ content were evaluated following WHO guidelines and compared with a marketed formulation, contributing to establishing pharmacopoeial standards for traditional medicines.

5.6 Bilvadi Gutika

Reference: AFI, Part I, Page 188

बिल्वस्य मूलं सुरसस्य पुष्पं फलं करञ्जस्य नतं सुराह्वम्।
फलत्रिकं व्योषनिशाद्वयं च बस्तस्य मूत्रेण सुसूक्ष्मपिष्टम्।।
भुजङ्गलूतोन्दुरवृश्चिकाद्यैर्विषूचिकाजीर्णगरज्वरैश्च।
आर्तान्नरान् भूतविधर्षितांश्च स्वस्थीकरोत्यञ्जनपाननस्यैः।।
(A.H.U., 36/84-85)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Bilva	Rt.	1 Part
Tulasi Pushpa	Fl.	1 Part
Karanja	Sd.	1 Part
Tagara	Rt.	1 Part
Devadaru	Ht. Wd.	1 Part
Haritaki	P.	1 Part
Bibhitaki	P.	1 Part
Amalaki	P.	1 Part
Shunthi	Rz.	1 Part
Maricha	Fr.	1 Part
Pippali	Fr.	1 Part
Haridra	Rz.	1 Part
Daruharidra	St.	1 Part
Basta Mutra	–	Q.S. for Mardana

Procedure:

1. Gather all the required dried ingredients for Bilvadi Gutika. Ensure each ingredient is clean and free from impurities.
2. Using a Khalva Yantra or a grinder, grind each ingredient separately into a fine powder.
3. Filter each powdered ingredient through a clean cloth to remove any coarse particles.
4. Combine all the filtered powders together in a clean, dry container. Mix thoroughly to ensure a uniform blend of all ingredients.
5. Filter the compound powder mixture once again through a clean cloth to ensure a fine consistency.
6. Adding Basta Mutraas mardana dravya, until it becomes a concentrated form and suitable for making tablets or pills, then roll it into tablets or pills.
7. Expose the tray to sunlight or under hot air oven for several hours to days until the material is completely dry.
8. Once fully dried, collect the dried material. This final product is called Bilvadi Gutika.
9. Store the Bilvadi Gutika in a clean, dry, airtight container to preserve its potency and freshness.

Indications: Luta- Vrishchika, Sarpavisha, Vishuchika, Ajirna, Garadosha, Jvara, Bhuta Badha.

PHARMACODYNAMICS

1. **Antitoxic and Antivenom**: Bilva and Tulasi have properties that neutralize toxins and venoms, aiding in the treatment of snake bites (Sarpavisha), scorpion stings (Vrishchika), and insect bites (Luta).
2. **Digestive Stimulation**: Haritaki, Bibhitaki, Amalaki (Triphala) along with Shunthi, Maricha, and Pippali enhance digestive function, relieve indigestion (Ajirna), and promote bowel movements.
3. **Antimicrobial and Anti-inflammatory**: Haridra and Daruharidra possess strong antimicrobial and anti-inflammatory properties, helping to manage infections and reduce inflammation.
4. **Antipyretic**: Haritaki, Bibhitaki, Amalaki (Triphala) have antipyretic properties, reducing fever (Jvara) and associated symptoms.
5. **Immunomodulatory and Detoxifying**: Bilva, Haritaki, and Tulasi help in modulating the immune response, enhancing the body's ability to fight infections and detoxify harmful substances.
6. **Carminative and Antispasmodic**: Pippali, Maricha, and Shunthi relieve gas and spasms, reducing abdominal discomfort and improving overall digestive health.

PHARMACOKINETICS

1. **Absorption**: Bilvadi Gutika, administered orally, is absorbed through the gastrointestinal tract. The presence of Piperine from Pippali enhances the absorption of other active constituents.
2. **Distribution**: The active compounds are distributed through the bloodstream, targeting the digestive system, liver, immune system, and sites of infection or inflammation.
3. **Metabolism**: The herbs undergo hepatic metabolism, where they are converted into active metabolites. The involvement of Haritaki, Bibhitaki, and Amalaki (Triphala) ensures efficient liver function and metabolism.
4. **Excretion**: Metabolites are excreted primarily through urine and feces. The use of Mutra (Goat's urine) for processing helps in the detoxification process and ensures effective elimination of waste products from the body.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Conceptual Study of Action of Bilvadi Gutika in Chemotherapy Induced Hepatotoxicity.	Dr. Sreekutty P.V., Ist year P.G. Scholar, Department of P.G. studies in Agadatantra, SDM College of Ayurveda, Udupi, Karnataka	Bilvadi Gutika has the potential to be a preferred treatment for toxic pathologies resulting from chemotherapy drugs due to its hepatoprotective properties. This formulation is recognized for its anti-toxic effects, making it a potential remedy for chemotherapy-induced hepatotoxicity.

Sr.No.	Article Name	Author Name	Result
2.	"A Critical Review on Bilvadi Agada"	Dr. Ajeet Singh, Dr. Ajeet Singh, Assistant Professor, Dept. of Agadatantra evam Vidhi Vaidyaka Chandrashekhar Singh Ayurved Sansthan, Kausambi, U.P.	Bilvadi Agada, a tablet formulation, is preferred in clinical practice for its pleasant taste, longer shelf life, and easy dosage adjustment. It's recommended for acute toxico-pathological conditions and contains multiple herbs such as Bilva, Surasa, Karanja, Nata, Suvaha, Haridra, Daruharidra, Triphala, Trikatu, etc. It's commonly used for its properties in balancing vata-kapha, its pungent-bitter taste, and its heating potency.
3.	Phytochemical Analysis of Bilvadi Gutika	Anjali W.G., PG Scholar, Department of Agada Tantra, Sri Dharmasthala Manjunatheshwara College of Ayurveda and Hospital, Hassan, Karnataka, India	The formulation contains alkaloids, steroids, tannins, flavonoids, coumarins, resin, and quinones, which are also found in its ingredients. The extract of Bilvadi Gutika underwent phytochemical analysis, revealing these constituents. Their collective action contributes to the formulation's effectiveness, despite potential variations in individual ingredient profiles.
4.	An Open Label Single Arm Interventional Study to Evaluate the Efficacy of Bilvadi Gutika on Raised Level of ESR in Musculoskeletal Disorders	Sanjana P, IV BAMS, Dept.of PG Studies in Svasthavritta, JSS Ayurveda Medical College, Mysuru-570028, Karnataka, India	The study evaluated Bilvadi Gutika's efficacy in reducing elevated Erythrocyte Sedimentation Rate (ESR) in Musculoskeletal Disorders. Despite significant symptom improvement, the paired t-test for ESR showed a statistically insignificant result (p=.) Overall, Bilvadi Gutika moderately reduces elevated ESR levels and significantly alleviates associated symptoms in musculoskeletal disorders.

5.7 Chitrakadi Gutika

Reference: AFI, Part I, Page 186

चित्रकं पिप्पलीमूलं द्वौ क्षारौ लवणानि च।
व्योषं हिङ्गवजमोदां च चव्यं चैकत्र चूर्णयेत्।।
गुटिका मातुलुङ्गस्य दाडिमस्य रसेन वा।
कृता विपाचयत्यामं दीपयत्याशु चानलम्।।

(Cha.Chi., 15/96-97)

Ingredients Used

Drug Name	Part Used	Proportion
Chitraka	Rt.	1 Part
Pippali	Rt.	1 Part
Yavakshara	Pl.	1 Part
Sarji Kshara	–	1 Part
Sauvarchala Lavana	–	1 Part
Saindhava Lavana	–	1 Part
Vida Lavana	–	1 Part
Samudra Lavana	–	1 Part
Audbhida Lavana	–	1 Part
Shunthi	Rz.	1 Part
Maricha	Fr.	1 Part
Pippali	Fr.	1 Part
Hingu	Exd.	1 Part
Ajamoda	Fr.	1 Part
Chavya	St.	1 Part
Matulunga Rasa	Fr.	Q.S. for Mardana

Procedure:

1. Gather all the required dried ingredients for Chitrakadi Gutika. Ensure each ingredient is clean and free from impurities.
2. Using a Khalva Yantra (traditional mortar and pestle) or a grinder, grind each ingredient separately into a fine powder.
3. Filter each powdered ingredient through a clean cloth to remove any coarse particles.
4. Combine all the filtered powders together in a clean, dry container. Mix thoroughly to ensure a uniform blend of all ingredients.
5. Filter the compound powder mixture once again through a clean cloth to ensure a fine consistency.
6. Adding Matulunga Rasa as mardana dravya, until it becomes a concentrated form and suitable for making tablets or pills, then roll it into tablets or pills.
7. Expose the tray to sunlight or under hot air oven for several hours to days until the material is completely dry.
8. Once fully dried, collect the dried material. This final product is called Chitrakadi Gutika.
9. Store the Chitrakadi Gutika in a clean, dry, airtight container to preserve its potency and freshness.

Dose: ½ gms.

Anupana: Warm water, Butter milk.

Indications: Agnimandya, Amadosha, Grahani.

Pharmacodynamics

1. **Digestive Stimulation:** Chitraka and Pippali Mula enhance digestive fire (Agni), promoting efficient digestion and metabolism.

2. **Appetizer and Carminative**: The combination of Shunthi, Maricha, and Pippali stimulates appetite, reduces bloating, and relieves gas.
3. **Laxative and Antacid**: Yavakshara and Sarjikshara act as mild laxatives and antacids, alleviating constipation and hyperacidity.
4. **Mineral Support**: Various salts (Lavana), including Sauvarchala Lavana, Saindhava Lavana, Vida Lavana, Samudra Lavana, and Audbhida Lavana, help balance electrolytes, improve digestion, and prevent fluid retention.
5. **Carminative and Anti-flatulent**: Hingu, Ajamoda, and Chavya prevent the formation of gas and relieve abdominal discomfort.
6. **Amelioration of Ama (Toxins)**: The overall formulation works to digest and eliminate Ama (toxic undigested material) from the gastrointestinal tract, enhancing overall digestive health and preventing associated disorders.

PHARMACOKINETICS

1. **Absorption**: Chitrakadi Gutika, administered orally, is absorbed through the gastrointestinal tract. The presence of bio-enhancers like Pippali ensures better absorption of active ingredients.
2. **Distribution**: The active compounds are distributed through the bloodstream, targeting the gastrointestinal system, liver, and areas with accumulated Ama.
3. **Metabolism**: The ingredients undergo hepatic metabolism, where they are converted into active metabolites. Shunthi, Maricha, and Pippali support liver function and enhance metabolic processes.
4. **Excretion**: Metabolites are primarily excreted through urine and feces. The use of salts (Lavana) helps in maintaining fluid balance and ensures effective elimination of waste products.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Role of Chitrakadi Gutika in Gastrointestinal Disorders—A Review	Santosh Girbide, Professor and HOD, Department of Roganidana and Vikriti Vigyana, RA Podar Medical College, Worl, Mumbai, Maharashtra	Chitrakadi Gutika, from Charakasamhita and Yogaratnakara, treats gastrointestinal disorders, notably Grahani, by aiding Amapachana with properties like lightness, dryness, pungent taste, and hot potency, it targets Vata-Kapha imbalances, especially in Pittaja conditions. Various anupanas enhance its effectiveness.
2.	Conceptual Review on Chitrakadi Vati as a Agnidipana in Mahasrotas	Mahendra Ther, PG (Scholar) – Swasthvritta Bhausaheb Mulak Ayurveda Mahavidyalaya, Nagpur, MHA, India	Chitrakadi Vati, formulated by Charaka, acts as an Agnidipana in Mahasrotas Reviewing various Ayurvedic texts and clinical trials, it's found effective for enhancing digestion and treating anorexia and indigestion.
3.	Controlled Clinical Study of Chitrakadi Gutika in the Management of Medoroga	Dr. Sonal A Shah, HOD and Professor at Loknete Rajarambapu Patil Ayurved College, P.G. Institute and Reseach Centre, Islampur, Sangli, MHA	The study aimed to evaluate Chitrakadi Gutika's impact on obesity. Forty patients received a daily dose of mg along with Tambul Lavang before morning meals for three months, followed by a day follow-up. Results showed significant reductions in weight, BMI, and obesity symptoms.
4.	A Critical Review: Probable Mode of Action of Chitrakadi Vati	Vd Dipika Dongare, PG Scholar, Department of Rasashastra and Bhaishajya Kalpana.	The study aimed to investigate the potential mode of action of Chitrakadi Vati. **Methodology:** The study involved a critical review of the ingredients of Chitrakadi Vati and their properties to elucidate its probable mode of action.
5.	Standardization of Chitrakadi Vati: An Ayurvedic Polyherbal Formulation	Vineeta Khanvilkar, Bharati Vidyapeeth's College of Pharmacy, C.B.D Belapur, Navi Mumbai, Maharashtra, India	The study developed a rapid HPTLC method to standardize Chitrakadi Vati, an Ayurvedic remedy for various conditions Piperine and plumbagin were identified as marker compounds, and the method was validated per ICH guidelines. It successfully quantified these compounds in both in-house and marketed formulations.

5.8 Sanjivani Vati

Reference: B.R. Jvaradhikara

विडङ्गं नागरं कृष्णा पथ्यामलविभीतकम्।
वच गुडूची भल्लातं सविषं चात्र योजयेत्।।
एतानि समभागानि गोमूत्रेणैव पेषयेत्।
गुञ्जाभा गुटिका कार्या दद्यादार्द्रकजै रसैः।।
एकामजीर्णगुल्मेषु द्वे विषूच्यां प्रदापयेत्।
तिस्रश्च सर्पदष्टे तु चतस्रः सान्निपातके।।
वटी सञ्जीवनी नाम्ना सञ्जीवयति मानवम्।।

(B.R. Jvaradhikara, 5/1009-1011)

Ingredients Used

Drug Name	Part Used	Proportion
Vidanga	Fr.	1 Part
Shunthi	Rz.	1 Part
Pippali	Fr.	1 Part
Haritaki	P.	1 Part
Amalaki	P.	1 Part
Bibhitaki	P.	1 Part
Vacha	Rz.	1 Part
Guduchi	St.	1 Part
Shuddha Bilva	Fr.	1 Part
Shuddha Vatsanabha	Rz.	1 Part
Go- Mutra	–	Q.S. for Bhavana

Procedure:

1. Take all the required dried ingredients for Sanjivani Vati. Ensure each ingredient is clean and free from impurities.
2. Using a Khalva Yantra or a grinder, grind each ingredient separately into a fine powder.
3. Filter each powdered ingredient through a clean cloth to remove any coarse particles.
4. Combine all the filtered powders together in a clean, dry container. Mix thoroughly to ensure a uniform blend of all ingredients.
5. Filter the compound powder mixture once again through a clean cloth to ensure a fine consistency.
6. Adding Go- Mutra as bhavana, until it becomes a concentrated form and suitable for making tablets or pills, then roll it into tablets or pills.
7. Expose the tray to sunlight or under hot air oven for several hours to days until the material is completely dry.
8. Once fully dried, collect the dried material. This final product is called Sanjivani Vati.
9. Store the Sanjivani Vati in a clean, dry, airtight container to preserve its potency and freshness.

Dose: 125-250 mg.

Anupana: Adaraka Svarasa, Warm Water.

Indications: Jvara, Ajirna, Aruchi.

Pharmacodynamics

1. **Antipyretic Activity:** Shunthi, Pippali, and Vatsanabha possess antipyretic properties, reducing fever by acting on the thermoregulatory center in the brain.
2. **Immunomodulatory Effects:** Guduchi boosts immunity, enhancing the body's defense mechanisms against infections associated with fever.
3. **Digestive Support:** Haritaki (Terminalia chebula), Amalaki, and Bibhitaki aid in digestion and metabolism, addressing gastrointestinal disturbances often accompanying fever.
4. **Anti-inflammatory Action:** Vidanga and Vacha possess anti-inflammatory properties, reducing inflamm-ation and associated symptoms.

Pharmacokinetics

1. **Absorption:** The active ingredients in Sanjivani Vati are absorbed through the gastrointestinal tract after oral administration.
2. **Distribution:** The components are distributed through the bloodstream, targeting various organs and tissues affected during fever and associated symptoms.
3. **Metabolism:** Metabolism of the constituents occurs primarily in the liver, where they are transformed into active metabolites or undergo conjugation for elimination.
4. **Excretion:** Metabolites and unmetabolized components are excreted via urine and feces, with elimination facilitated by the renal and gastrointestinal systems.

Research Updates

Sr.No.	Article Name	Author Name	Result
1.	A Scientific Review on Sanjivani Vati with Special Reference to its Pharmacological Actions, Therapeutic Indications and Pharmaceutics	Deepika Tewari, Regional Ayurveda Research Institute for Infectious Diseases, Patna, Bihar, India	Sanjivani Vati, a well-known Ayurvedic remedy, effectively treats gastrointestinal, respiratory, and inflammatory joint disorders, along with fevers. This review offers insights into its pharmaceutical and therapeutic aspects, showcasing its broad spectrum of uses supported by pharmacological properties of its ingredients.
2.	Probable Mode of Action of Sanjivani Vati – A Critical Review	Parul Rani, Assistant Professor and Deputy C.M.S. of Pharmacy.	The primary goal of this review is to explore the therapeutic applications of Sanjivani Vati and delve into the varied pharmacological properties and therapeutic uses of its isolated constituent drugs. The focus lies in identifying the key properties of these individual drugs and their potential impacts on the prevention and treatment of diseases according to the principles of Samprapti Vighatana.

Sr.No.	Article Name	Author Name	Result
3.	A Study of Microbial Contamination in Sanjivani Vati, A Cow Urine Prepared Drug	Vimal Tewari, Clinical Research Section, Regional Ayurveda Research Institute, CCRAS, Ministry of AYUSH, Government of India, Patna, Bihar, India	The main aim of this study was to assess the microbial load in Sanjivani Vati. Samples of Sanjivani Vati prepared in the institute pharmacy and from a commercial pharmacy were evaluated for microbial content by an external laboratory. The assessment included quantitative and qualitative analysis of microbial strains such as Ecoli, Salmonella spp., Staphylococcus aureus, Fungus, and Total viable aerobic bacterial count. Both samples exhibited insignificant levels of the tested microbes.
4.	In-vivo Study of the Efficacy of Sanjeevani Vati in Snake Venom Poisoining	Pradip S. Mohurle, Department of Agadatantra Evum Vidhivaidyaka, North Eastern Institute of Ayurveda & Homeopathy (NEIAH), Shillong, Meghalaya, India.	Sanjivani Vati, an ophidian, shows efficacy as a first aid measure against Russell's viper venom by significantly extending survival time. Notably, it does not interact with Polyvalent Anti-Snake Venom Serum (PVASVS). However, it does not delay the onset of paralysis or convulsions when administered orally after common cobra venom ingestion.

5.9 Vyoshadi Vati

Reference: AFI, Part III, Page 253

व्योषाम्लवेतसं चव्यं तालीसं चित्रकं तथा।
जीरकं तिन्तिडीकं च प्रत्येकं कर्षभागिकम्।।
त्रिसुगन्धं त्रिशाणं स्याद् गुडः स्यात्कर्षविंशतिः।
व्योषादिगुटिका सेयं पीनसश्वासकासजित्।।
रुचिस्वरकरी ख्याता प्रतिश्यायप्रणाशिनी।।

(Sha. S.M. Kha., 7/22-23)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Shunthi	Rz.	4 gms
Maricha	Fr.	4 gms
Pippali	Fr.	4 gms
Amalavetasa	St.	12 gms
Chavya	St.	12 gms
Talisa	Lf.	12 gms
Chitraka	Rt.	12 gms
Jiraka	Fr.	12 gms
Tintidika	Fr.	12 gms
Tvak	St.Bk	3 gms
Ela	Sd.	3 gms
Tejpatra	Lf.	3 gms
Guda	–	240 gms

Procedure:

1. Take all the required dried ingredients for Vyoshadi Vati. Ensure each ingredient is clean and free from impurities.
2. Using a Khalva Yantra or a grinder, grind each ingredient separately into a fine powder.
3. Filter each powdered ingredient through a clean cloth to remove any coarse particles.
4. Combine all the filtered powders together in a clean, dry container. Mix thoroughly to ensure a uniform blend of all ingredients.
5. Filter the compound powder mixture once again through a clean cloth to ensure a fine consistency.
6. Adding Guda and pounding well, until it becomes suitable for making tablets or pills, then roll it into tablets or pills.
7. Expose the tray to sunlight or under hot air oven for several hours to days until the material is completely dry.
8. Once fully dried, collect the dried material. This final product is called Vyoshadi Vati.
9. Store the Vyoshadi Vati in a clean, dry, airtight container to preserve its potency and freshness.

Dose: 250-500 mg.

Indications: Pinasa, Kasa, Shvasa, Aruchi, Pratikshaya.

PHARMACODYNAMICS

1. **Respiratory Support**: Shunthi, Maricha, and Pippali possess bronchodilatory properties, relieving respiratory congestion and facilitating easier breathing.
2. **Expectorant Activity**: Chavya and Talisa act as expecto-rants, promoting the expulsion of mucus from the respiratory tract, which is beneficial in conditions like cough and congestion.
3. **Anti-inflammatory Action**: Chitraka and Jiraka exhibit anti-inflammatory effects, reducing inflammation in the respiratory system and alleviating associated symptoms.
4. **Antitussive Effects**: Tintidika acts as an antitussive, suppressing cough reflex and providing relief from cough symptoms.

PHARMACOKINETICS

1. **Absorption**: The active constituents in Vyoshadi Vati are absorbed in the gastrointestinal tract after oral administration.

2. **Distribution**: Components are distributed systemically, reaching the respiratory mucosa and exerting their therapeutic effects.
3. **Metabolism**: Metabolism primarily occurs in the liver, where the active ingredients may undergo biotransformation into metabolites.
4. **Excretion**: Metabolites and unmetabolized compounds are eliminated via renal and fecal routes, with excretion facilitated by the kidneys and intestines.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Role of Vyoshadi Vati in Management of Pratishyaya in the Children	VD Sarfaraz Iqbal Memon, Rural Institute of Ayurved Research Centre & Hospital, Mayani, Satara, MHA.	Vyoshadivati, a traditional Ayurvedic remedy known for relieving pratishyaya symptoms as per classical texts, was assessed for its efficacy in managing pratishyaya in children. The study demonstrated that Vyoshadivati significantly outperformed chlorpheniramine (CPM) in reducing symptoms and signs associated with pratishyaya.

5.10 Bala Chaturbhadra Rasa

Reference: B.R. Balarogadhikara

घनकृष्णारुणाशृङ्गीचूर्णं क्षौद्रेण संयुतम्।
शिशोज्वर्वरातिसारघ्नं श्वासकासवमीहरम्।।

(B.R., Chaturbhadra Rasa, 71/38)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Musta	Dr. Rz.	1 Part
Pippali	Fr.	1 Part
Ativisha	Rt.	1 Part
Karkata shringi	Galls	1 Part

Procedure:

1. Gather all the required dried ingredients for Bala Chaturbhadra Rasa. Ensure each ingredient is clean and free from impurities.
2. Using a Khalva Yantra or a grinder, grind each ingredient separately into a fine powder.
3. Filter each powdered ingredient through a clean cloth to remove any coarse particles.
4. Combine all the filtered powders together in a clean, dry container. Mix thoroughly to ensure a uniform blend of all ingredients.
5. Filter the compound powder mixture once again through a clean cloth to ensure a fine consistency.
6. Store the final compound powder in sterilized, airtight glass containers to preserve its potency and freshness.

Dose: ½ - 1 gms.

Anupana: Madhu.

Indications: Jvara, Atisara, Kasa, Shvasa, Vamana.

PHARMACODYNAMICS

1. **Antipyretic Activity**: Musta and Pippali possess antipyretic properties, reducing fever by acting on the hypothalamus to lower body temperature.
2. **Anti-inflammatory Effects**: Ativisha exhibits anti-inflammatory activity, reducing inflammation associated with various conditions such as respiratory disorders and fever.
3. **Antidiarrheal Action**: Musta is known for its antidiarrheal effects, which can help alleviate symptoms of diarrhea (Atisara).
4. **Respiratory Support**: Karkatashringi has been traditionally used to treat respiratory ailments like cough (Kasa) and dyspnea (Shvasa), suggesting its respiratory support properties.

PHARMACOKINETICS

1. **Absorption**: The ingredients in Bala Chaturbhadra Rasa are absorbed in the gastrointestinal tract after oral administration.
2. **Distribution**: Components are distributed systemically, reaching target organs such as the hypothalamus (for antipyretic action) and the respiratory tract (for respiratory support).
3. **Metabolism**: Metabolism may occur primarily in the liver, where the active constituents undergo biotransformation into metabolites.
4. **Excretion**: Metabolites and unmetabolized compounds are eliminated via renal and fecal routes, with excretion facilitated by the kidneys and intestines.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	A Critical Review on Balachaturbhadra Churna: An Effective Ayurveda Formulation For the Pediatric Age	Abhishek Joshi, Universitas Hindu Indonesia, Denpasar, Bali, Republic of Indonesia.	This study compiled and reviewed references on Balachaturbhadra Churna, with five publications reaffirming its efficacy and safety. Experimental findings demonstrated no toxic hazards even at high doses, supporting its therapeutic use. While some limitations were noted, these results serve as a foundation for future clinical research.
2.	Balchaturbhadra Churna as a Potential Medicine for SARS-Cov2 Infection in Pediatric Setting: An in Silico Study	Kuldeep, RRAP - Central Ayurveda Research Institute for Cancer Mumbai, Central Council for Research in Ayurvedic Sciences, New Delhi	This study assesses the antiviral potential of phytochemicals from BC against SARS-CoV- through in silico analysis. Docking studies revealed promising binding affinity for specific compounds, especially those from Piper longum. These findings suggest BC as a potential treatment for SARS-CoV-, including in pediatric cases with multisystem inflammatory syndrome.
3.	Drug Dose Modification of Balachaturbhadra Syrup	Rohit A. Gokarn, Asst. Professor, Dept.of Rasashastra and BK, MGACHRC, Salod (H.), Wardha, MHA	Balachaturbhadra rasa can be transformed into a syrup with specific characteristics: brown colour, sweet taste, and various physicochemical properties including refractive index, pH, reducing sugar content, Brix value, and total solid content. Care must be taken during preparation to preserve active constituents. HPLC analysis indicates potential pharmacological effects, primarily due to acid-base strength compounds and polyphenol derivatives.
4.	A Critical Analysis of Balchaturbhadra Churna in Management of Childhood Disorders—Evidences From Ayurveda	Nitu Sinha, Assistant Professor, Department of Kaumarbhritya, Shree Ram Ayurvedic Medical College and Hospital, Meerut, U.P.	Balchaturbhadra churna, analyzed through Ayurvedic classics and research, exhibits Katu rasa, Laghu guna, and Usna virya properties, making it effective for childhood disorders like vomiting, diarrhea, fever, and respiratory issues. Studies suggest its diverse therapeutic benefits, including immunomodulation, anti-inflammatory, antimicrobial, and hepatoprotective effectsIts safety profile encourages its use in children, potentially reducing antibiotic misuse.

5.11 Simhanada Guggulu

Reference: AFI, Part I, Page 71

पलत्रयं कषायस्य त्रिफलाया: सुचूर्णितम्।
सौगन्धिकपलञ्चैकं कौशिकस्य पलन्तथा।।
कुडवं चित्रतैलस्य सर्वमादाय यत्नत:।
पाचयेत् पाकविद्वैद्य: पात्रे लौहमये दृढे।।
हन्ति वातं तथा पित्तं श्लेष्माणं खञ्जपङ्गुताम्।
श्वासं सुदुर्जयं हन्ति कासं पञ्चविधन्तथा।।
कुष्ठानि वातरक्तानि गुल्मशूलोदराणि च।
आमवातं जयेदेतदपि वैद्यविवर्जितम्।।
एतदभ्यासयोगेन जरापलितनाशनम्।
सर्पिस्तैलवसोपेतमश्नीयाच्छालिषष्टिकम्।।
सिंहनाद इति ख्यातो रोगवारणदर्पहा।
वह्निवृद्धिकर: पुंसां भाषितो दण्डपाणिना।।

(B.R. Amavata., 29/130-135)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Haritaki	P.	48 gms
Bibhitaki	P.	48 gms
Amalaki	P.	48 gms
Water for decoction	–	576 ml
Reduced to	–	144ml
Shuddha Gandhaka	–	48 gms
Shuddha Guggulu	(O.R.)	48 gms
Eranda Taila	Ol.	192 ml

Procedure:

1. Take the required quantity of Triphala (Haritaki, Bibhitaki and Amalaki). Add four times the amount of water to the Triphala and Boil the mixture until it is reduced to 1/4th of its original volume.
2. Filter the Triphala Kvatha to remove solid residue.
3. Add the required amount of Shuddha Guggulu to the filtered Triphala Kvatha and Boil the mixture again until it reaches a thick consistency (Guda Paka).
4. Add all the remaining drugs to the thickened mixture and mix thoroughly to form a homogeneous mass.
5. Shape the mixture into a large bolus.
6. Roll the bolus into small, uniform pills.
7. Allow the pills to dry properly and store the dried pills in a sterilized, airtight container.

Dose: 3 gms.

Anupana: Warm Water.

Indications: Khanja, Pandu, Amavata, Vatarakta, Kushtha, Vataroga, Kapharoga, Pitta Roga, Pangu, Shvasa, Kasa, Gulma Shula, Udara Shula, Palita, Agnimandya.

PHARMACODYNAMICS

1. **Balancing Tridoshas**: Simhanada Guggulu has a potent effect in balancing the tridoshas (Vata, Pitta, Kapha), making it beneficial for various disorders associated with their imbalancelt effectively alleviates Vata and Pitta aggravation, thereby reducing symptoms related to these doshas such as pain, inflammation, and digestive disturbances.
2. **Anti-inflammatory**: The combination of Haritaki, Bibhitaki, and Amalaki along with Shuddha Gandhaka and Shuddha Guggulu provides potent anti-inflammatory effectsThis action helps in reducing inflammation associated with various conditions like arthritis, skin disorders, and respiratory ailments.
3. **Antioxidant**: The presence of Haritaki, Bibhitaki, and Amalaki in Simhanada Guggulu imparts antioxidant properties, which help in scavenging free radicals and preventing oxidative damage to cells and tissues. This property contributes to its anti-aging and rejuvenating effects.
4. **Immunomodulatory**: Simhanada Guggulu enhances the body's immune response, making it effective in combating infections and boosting overall immunity. This property is particularly useful in conditions like recurrent respiratory infections and autoimmune disorders.
5. **Digestive Aid**: The formulation aids digestion by stimulating the digestive fire (Agni) and promoting proper assimilation and absorption of nutrients. It helps in relieving digestive disorders such as indigestion, bloating, and constipation.
6. **Blood Purifier**: It purifies the blood and helps in the elimination of toxins from the body, which is beneficial in skin diseases, metabolic disorders, and rheumatic conditions.

PHARMACOKINETICS

1. **Absorption**: The water decoction of Haritaki, Bibhitaki, and Amalaki along with other ingredients facilitates the absorption of active constituents in the gastrointestinal tract.
2. **Distribution**: The active constituents are distributed throughout the body via the bloodstream, exerting their therapeutic effects on various organs and tissues.
3. **Metabolism**: The active compounds undergo metabolism in the liver, where they may be biotransformed into active metabolites or excreted as waste products.
4. **Excretion**: Metabolites and unmetabolized compounds are eliminated primarily through renal excretion and to some extent through bile.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Vivid Action of Simhanada Guggulu in the Management of Amavata (Rheumatoid Arthritis): A Review	Mishra, Meenu, Post Graduate Scholar Kayachikitsa, Ayurveda College and Institute, Bhopal, Madhya Pradesh, India	After reviewing various sources, it's clear that Simhanada Guggulu possesses properties like balancing doshas (Kapha and Vata), increasing Pitta, enhancing digestion, and eliminating toxins. These suggest its potential as a Disease Modifying Anti Rheumatic Drug (DMARD), making it a promising Ayurvedic remedy for managing Rheumatoid Arthritis (Amavata).
2.	A Revised Pharmacognostical and physico-chemical analysis of Simhanada Guggulu	Mishra, Gauridutt, Ph.D., Scholar, Department of Roga Nidana Evam Vikriti Vijnana, Institute for Post Graduate Teaching & Research in Ayurveda, Gujarat Ayurved University, Jamnagar, Gujarat, India	The pharmacognostical analysis of Simhanada Guggulu confirmed its authenticity and quality through characteristic features such as Trichoma of Bibhitaki, Starch grain of Haritaki, Fibers of Amalaki, and Silica deposition of Amalaki without staining. Physicochemical parameters were within acceptable limits, including weight variation (.%), hardness (. kg/cm), and disintegration time (> hr)High Performance Thin Layer Chromatography (HPTLC) revealed distinct spots at nm and nm, supporting previous research on its pharmacological properties.
3.	Comparative Therapeutic Effect of Guduchi Rasayana and Simhanada Guggulu in Amavata	Brinda G M, Final Year PG Scholar, Dept. of PG Studies In Kaya Chikitsa and Manasa Roga, Shree Dharmasthala Manjunatheshwara College of Ayurveda, Udupi, Karnataka, India.	In a comparative clinical trial, Guduchi Rasayana and Simhanada Guggulu were assessed in Amavata patients. Guduchi Rasayana, administered for days, yielded .% major, .% moderate, and % mild improvement Simhanada Guggulu, given for the same duration, showed .% major, .% moderate, and .% mild improvement Both treatments significantly alleviated symptoms, with Guduchi Rasayana demonstrating slightly superior efficacy.

5.12 Yogaraja Guggulu

Reference: AFI, Part I, Page 69

चित्रकं पिप्पलीमूलं यमानी कारवी तथा।
विडङ्गान्यजमोदा च जीरकं सुरदारु च।।
चव्येला सैन्धवं कुष्ठं रास्नागोक्षुरधान्यकम्।
त्रिफला मुस्तकं व्योष त्वगुशीरं यवाग्रजम्।।
तालीशपत्रं पत्रञ्च श्लक्ष्णचूर्णानि कारयेत्।
यावन्त्येतानि चूर्णानि तावन्मात्रन्तु गुग्गुलुम्।।
सम्मर्द्य सर्पिषा गाढं स्निग्धे भाण्डे निधापयेत्।
अतो मात्रां प्रयुञ्जीत यथेष्टाहारवानपि।।
योगराज इति ख्यातो योगोऽयममृतोपमः।
आमवाताङ्गवातादीन् कृमिदुष्टव्रणानि च।।
प्लीहगुल्मोदरानाहदुर्नामानि विनाशयेत्।
अग्निञ्च कुरुते दीप्तं तेजोवृद्धिं बलं तथा।।
वातरोगान् जयत्येष सन्धिमज्जागतानपि।।

(B.R. Amavata., 29/90-95)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Chitraka	Rt.	1 Part
Pippali Mula	Rt.	1 Part
Yavani	Sd.	1 Part
Krishna Jiraka	Fr.	1 Part
Vidanga	Fr.	1 Part
Ajamoda	Fr.	1 Part
Shveta Jiraka	Fr.	1 Part
Devadaru	Ht. Wd.	1 Part
Chavya	St.	1 Part
Ela	Sd.	1 Part
Saindhava Lavana	–	1 Part
Kushtha	Rt.	1 Part
Rasana	Rt./Lf.	1 Part
Gokshura	Fr.	1 Part
Dhanyaka	Fr.	1 Part
Haritaki	P.	1 Part
Bibhitaki	P.	1 Part
Amalaki	P.	1 Part
Musta	Rz.	1 Part
Shunthi	Rz.	1 Part
Maricha	Fr.	1 Part
Pippali	Fr.	1 Part
Tvak	St.Bk.	1 Part
Ushira	Rt.	1 Part
Yava Kshara	Pl.	1 Part
Talisa Patra	Lf.	1 Part
Patra	Lf.	1 Part
Shuddha Guggulu	Exd.	1 Part
Go- Ghrita	–	1 Part

Procedure:

1. Gather all the required dried ingredients for Yogaraja Guggulu except Suddha Guggulu. Ensure each ingredient is clean and free from impurities.
2. Using a Khalva Yantra or a grinder, grind each ingredient separately into a fine powder.
3. Filter each powdered ingredient through a clean cloth to remove any coarse particles.
4. Combine all the filtered powders together in a clean, dry container. Mix thoroughly to ensure a uniform blend of all ingredients.
5. Filter the compound powder mixture once again through a clean cloth to ensure a fine consistency.
6. Melt the Guggulu by adding water and heating it over a mild flame. Once the Guggulu is melted, remove it from the heat and add all the remaining homogenous churnas.
7. Mixed well untill suitable for tablets form.
8. Allow the pills to dry properly and store the dried pills in a sterilized, airtight container.

Dose: 3 gms.

Anupana: Rasna Saptaka Kvatha, Lashuna Svarasa, Honey.

Indications: Udararoga, Amavata, Adhyavata, Krimi, Dushta Vrana, Pliha Roga, Gulma, Anaha, Arsha, Agnimandya, Daurbalya, Sandhigata Vata, Majja-gata Vata.

PHARMACODYNAMICS

1. **Balancing Doshas:** Yogaraja Guggulu acts on the doshas, particularly Vata and Kapha, helping to restore their balance. This property makes it effective in conditions where Vata and Kapha imbalances are predominant, such as joint disorders, digestive issues, and inflammatory conditions.
2. **Anti-inflammatory:** The combination of herbs like Chitraka, Pippali, Vidanga, and Musta possesses potent anti-inflammatory properties. These ingredients help alleviate inflammation in various tissues and organs, providing relief from pain and swelling.
3. **Digestive Stimulant:** Yogaraja Guggulu stimulates the digestive fire (Agni), thereby enhancing digestion and promoting the proper assimilation of nutrients. It aids in the management of digestive disorders like indigestion, bloating, and abdominal discomfort.
4. **Detoxification:** The formulation aids in detoxification by eliminating ama (toxins) from the body. This property is beneficial in conditions associated with

toxin accumulation, such as rheumatic disorders, skin diseases, and metabolic imbalances.

5. **Analgesic**: It exhibits analgesic properties, which help alleviate pain associated with various musculoskeletal disorders, arthritis, and inflammatory conditions.
6. **Immunomodulatory**: Yogaraja Guggulu modulates the immune system, enhancing the body's defense mechanisms against infections and diseases. This property contributes to its efficacy in treating various infectious and autoimmune conditions.

PHARMACOKINETICS

1. **Absorption**: The active constituents in Yogaraja Guggulu are well-absorbed from the gastrointestinal tract due to the presence of lipophilic compounds and digestive stimulant herbs.
2. **Distribution**: Once absorbed, the active compounds are distributed throughout the body via the bloodstream, exerting their therapeutic effects on various organs and tissues.
3. **Metabolism**: The active constituents undergo metabolism in the liver, where they may be biotransformed into active metabolites or conjugated with glucuronic acid for elimination.
4. **Excretion**: Metabolites and unmetabolized compounds are primarily excreted through urine and to a lesser extent through bile and feces.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Standardization of Yogaraja Guggulu—An Ayurvedic Polyherbal Formultion	KR Gopala Simha, Sodhana Trust, Gautam Towers, Sardar Patel Road, Secunderabad-500003, Andhra Pradesh.	The traditional preparation of Yogaraja Guggulu, an Ayurvedic medicine, has been standardized through the integration of modern scientific quality control measures. The outcomes of this standardization process could potentially inform the establishment of new pharmacopoeial standards, aimed at optimizing the efficacy of the medicine.
2.	A Critical Review on Yogaraja Guggulu	Dr. Rohitakumar, PG Scholar, Department of R.S. & B.K. Government Ayurvedic Medical College and Hospital, Ballari, Karanataka, India	Yogaraja Guggulu, utilized for osteoarthritis and other related conditions, comprises ingredients targeting vata accumulation in joints and muscles. This review delves into its therapeutic and pharmacological aspects, offering valuable insights for researchers studying this Ayurvedic remedy.
3.	Evaluation of The Anti-Inflammatory Effect of Yograj Guggul: An in Vitro Study	Renuka Munshi, Dept. of Clinical Pharmacology, TN Medical College and BYL Nair Charitable Hospital, Mumbai Central, Mumbai, MHA, India	The study evaluated YG's anti-inflammatory effects by testing its inhibition of COX- & COX- and -LOX enzymes in vitro using EIAYG, at concentrations of, and µg/ml, significantly inhibited both COX enzymes at µg/ml, comparable to aspirinIt also dose-dependently inhibited -LOX enzyme, with maximum effect at µg/ml, surpassing aspirin. These findings underscore YG's potential as an anti-inflammatory agent and warrant further exploration for treating inflammatory respiratory disorders.
4.	Quality Assessment of Different Variants of Yogaraj Guggulu	A.K. Meena, National Institute of Ayurvedic Pharmaceutical Research, Patiala - 147001, Punjab, (India)	Two samples taken for study. Sample 1 had a loss on drying at 105°C of 3.84%w/w, while sample 2 showed 10.76%w/w. Total ash values were 7.02%w/w, with water soluble ash content at 8.87%w/w. Acid insoluble ash values were 0.987%w/w and 1.09%w/w for samples 1 and 2, respectively. Water soluble ext'active values indicated various compounds, including sugar, acids, and inorganic compounds. Alcohol soluble extractive values suggested the presence of polar constituents like phenols, alkaloids, steroids, glycosides, and flavonoids. Additionally, TLC was performed using a methanol extract of YRG.

5.13 Chyavanaprasha Avaleha

Reference: AFI, Part I, page 37

बिल्वोऽग्निमन्थः श्योनाकः काश्मर्यः पाटलिर्बला
पर्ण्यश्वगन्धः पिप्पल्यः श्वदंष्ट्रा बृहतीद्वयम्।।
शृङ्गी तामलकी द्राक्षा जीवन्ती पुष्करागुरु।
अभया चामृता ऋद्धिर्जीवकर्षभकौ शटी।।
मुस्तं पुनर्नवा मेदा सैला चन्दनमुत्पलम्।
विदारी वृषमूलानि काकोली काकनासिका।।
एषां पलोन्मितान् भागाञ्छतान्यामलकस्य च।
पञ्च दद्यात्तदैकध्यं जलद्रोणे विपाचयेत्।।
ज्ञात्वा गतरसान्येतान्यौषधान्यथ तं रसम्।
तच्चामलकमुद्धृत्य निष्कुलं तैलसर्पिषोः।।
पलद्वादशके भृष्ट्वा दत्त्वा चार्धतुलां भिषक्।
मत्स्यण्डिकायाः पूताया लेहवत्साधु साधयेत्।।
षट्पलं मधुनश्चात्र सिद्धशीते प्रदापयेत्।
चतुष्पलं तुगाक्षीर्याः पिप्पलीद्विपलं तथा।।

पलमेकं निदध्याच्च त्वगेलापत्रकेशरात्
इत्ययं च्यवनप्राशः परमुक्तो रसायनः।।
कासश्वासहरश्चैव विशेषेणोपदिश्यते।
क्षीणक्षतानां वृद्धानां बालानां चाङ्गवर्धनः।।
स्वरक्षयमुरोरोगं हृद्रोगं वातशोणितम्।
पिपासां मूत्रशुक्रस्थान् दोषांश्चाप्यपकर्षति।।
अस्य मात्रां प्रयुञ्जीत योपरुन्ध्यान्न भोजनम्।
अस्य प्रयोगाच्च्यवनः सुवृद्धोऽभूत् पुनर्युवा।।
मेधां स्मृतिं कान्तिमनामयत्वमायुःप्रकर्षं बलमिन्द्रियाणाम्।
स्त्रीषु ग्रहर्षं परमग्निवृद्धिं वर्णप्रसादं पवनानुलोम्यम्।।
रसायनस्यास्य नरः प्रयोगाल्लभेत जीर्णोऽपि कुटीप्रवेशात्।
जराकृतं रूपमपास्य सर्वं बिभर्ति रूपं नवयौवनस्य।।

(Cha.Chi., 1/1/62-74)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Bilva	Rt./ St. Bk.	48 gms
Agnimantha	Rt./ St. Bk.	48 gms
Shyonaka	Rt./ St. Bk.	48 gms
Gambhari	Rt./ St. Bk.	48 gms
Patala	Rt./ St. Bk.	48 gms
Bala	Pl.	48 gms
Shalaparni	Pl.	48 gms
Prishniparni	Pl.	48 gms
Mudgaparni	Pl.	48 gms
Mashaparni	Pl.	48 gms
Pippali	Fr.	48 gms
Gokshura	Pl.	48 gms
Brihati	Pl.	48 gms
Kantakari	Pl.	48 gms
Karkatashringi	Gl.	48 gms
Tamalaki	Pl.	48 gms
Draksha	Dr.Fr.	48 gms
Jivanti	Rt.	48 gms
Pushkara	Rt.	48 gms
Agru	Ht. Wd.	48 gms
Abhaya	P.	48 gms
Amrita	St.	48 gms
Riddhi	Sub. Rt. Tr.	48 gms
Jivaka	Rt. Tr.	48 gms
Rishabhaka	Rt. Tr.	48 gms
Sati	Rz.	48 gms
Musta	Rz.	48 gms
Punarnava (Rakta)	Pl.	48 gms
Meda	Rt. Tr.	48 gms
Ela	Sd.	48 gms
Chandana	Ht. Wd.	48 gms
Utpala	Fl.	48 gms
Vidari	Rt. Tr.	48 gms
Vrishamula	Rt.	48 gms
Kakoli	Sub. Rt.	48 gms
Kakanasika	Fr.	48 gms
Amlaka	Fr.	500 in no
Water for Decoction	–	12.288L
Reduced to	–	3.072 L
Ghrita	–	288 gms
Talla	Ol.	288 gms
Matsyandika	–	2.400 kg
Madhu	–	288 gms
Tugakshiri	S.C.	192 gms
Pippali	Fr.	96 gms
Tvak	St. Bk.	48 gms
Ela	Sd.	48 gms
Patra	Lf.	48 gms
Kesara	Stmn.	48 gms

Procedure:

1. Bundle ripened fresh Amalaki in a piece of cloth.
2. Coarsely powder the ingredients from Bilva to Kakanasika and place them in a vessel.
3. Add 120 liters of water to the vessel. Suspend the Amalakipottali in the vessel and boil the mixture until the water is reduced to one-fourth (30 liters).
4. Remove the Amalaki bundle from the vessel and strain the decoction and keep it separately.
5. Remove the seeds from the boiled Amalaki and make a paste of the pulp.
6. Strain the paste through a piece of cloth or a 40-mesh sieve over a wide-mouthed vessel to remove fibers.
7. Fry the strained pulp with ghrita (ghee) and taila (oil) until the moisture evaporates.
8. Add sugar to the strained decoction and boil the mixture to the lehyapaka stage (semi-solid consistency).
9. Add the fried pulp to the lehyapaka and boil the mixture again until well combined.
10. Add the fine powders of ingredients from Tugakshiri to Kesara to the lehya. Stir well and allow the mixture to cool.
11. Once cooled, add madhu (honey) to the mixture and mix thoroughly.
12. Store in air tight container.

Dose: 12- 24 gms.

Anupana: Water, Milk.

Therapeutic Indication: Kasa, Shvasa, Kshata Kshina, Svarabheda, Hridroga, Mutraroga, Uroroga, Vatarakhta, Shukra Dosha, Pippasa, Rasayana, Medhya, Smritiprada, Jara.

PHARMACODYNAMICS

1. **Rejuvenation and Anti-aging**: Amalaki, Gokshura, Vidari, Meda, Kakoli. Rich in antioxidants and adaptogens, these ingredients combat oxidative stress, support cellular regeneration, and enhance overall vitality.
2. **Cognitive Enhancement**: Amalaki, Vacha, Pippali, Ela. These ingredients improve brain function, enhance neurotransmitter activity, and protect neural tissue.
3. **Immune Boosting**: Amalaki, Guduchi, Pippali. Boosts immune response, increases resistance to infections, and supports overall immune health.
4. **Respiratory Health**: Pippali, Gokshura, Kantakari, Brihati. These herbs have expectorant, broncho-dilator, and anti-inflammatory properties that clear respiratory passages and alleviate congestion.
5. **Digestive Health**: Pippali, Musta, Haritaki. Enhances digestion, improves nutrient absorption, and balances digestive fire (Agni).
6. **Cardiovascular Health**: Arjuna, Draksha, Pushkara-mula. Supports heart health by improving cardiac function, enhancing blood circulation, and providing antioxidant protection to cardiac tissues.

PHARMACOKINETICS

1. **Absorption**: Chyavanaprasha is absorbed through the gastrointestinal tract. The presence of honey and ghee enhances the absorption of fat-soluble vitamins and compounds.
2. **Distribution**: Once absorbed, the active compounds are distributed via the bloodstream to various tissues and organs where they exert their therapeutic effects.
3. **Metabolism**: The ingredients undergo metabolism primarily in the liver. They are biotransformed into active metabolites that enhance their bioactivity.
4. **Excretion**: The metabolites are excreted through the kidneys (urine) and the gastrointestinal tract (feces).

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Chyawanprash: A Traditional Indian Bioactive Health Supplement	Rohit Sharma, Central Ayurveda Research Institute for Drug Development (CCRAS), Ministry of AYUSH, Government of India, 4-CN Block, Sector-V, Bidhannagar, Kolkata-700091, India; medamrao69@gmail.com	Chyavanaprasha preparation involves decocting herbs, extracting, mixing with honey, and adding aromatic powders. The final product resembles fruit jam, with a sweet, sour, and spicy taste. Scientific exploration is needed to understand its therapeutic potential due to scattered information. Efforts were made to compile data from various sources, including ancient texts and scientific literature, to highlight CP's therapeutic role.
2.	Chyawanprash: An Ayurvedic Bioactive Immune & Curative Health Supplement	Sneha Jadhav, Department of Pharmaceutics Vasantidevi Patil Institute of Pharmacy, Kodoli Tal-Panhala, Dist. Kolhapur-416114 (MHA)	Chyavanaprasha, crafted from Ayurvedic herbs, is a popular dietary supplement in India. It boosts muscle strength, rejuvenates cells, balances doshas, slows aging, enhances memory, and supports heart health, and aids digestion and respiratory functions.
3.	Golden Ager Chyawanprash with Meager Evidential Base from Human Clinical Trials	Rohit Sharma, Department of Rasashastra and Bhaishajya Kalpana, Faculty of Ayurveda, Institute of Medical Sciences, Banaras Hindu University, Varanasi-221005, Uttar Pradesh, India	The report aims to dispel Chyavanaprasha usage misconceptions and guide researchers in bioactive natural products, drug development, functional foods, and nutraceuticals. National experts should convene to establish standardized CP research protocols.
4.	Pharmaceutical standardization of Chyawanprash prepared by two different methods	Bharat Rathi, Professor, Dept. of RSBK, Mahatma Gandhi Ayurved College, Salod, Maharastra, India.	The study compared pharmacy and traditional Chawanaprash preparation methods, favouring the pharmacy approach due to better outcomes in time, yield, and physicochemical properties. Notably, frying in non-polar media may alter ascorbic acid Considering polarity's impact on absorption, pharmacy-prepared Chyavanaprasha may offer superior efficacy, pending further validation.

5.14 Dadimavaleha

Reference: Y.R. Jvaratisaradhyaya

दाडिमादिफलप्रस्थं चतुष्प्रस्थजले पचेत्।
चतुर्भागकषायेऽस्मिञ्शर्कराप्रस्थमेव च।।
नागरं पिप्पलीमूलं कणाधान्यकदीप्यकम्।
जातीफलं जातिपत्रं मरिचं जीरकं तुगा।।
विजया निम्बपत्रं च समङ्गा कूटशाल्मली।
अरल्वतिविषा पाठा लवङ्गं च पृथक्पलम्।।
घृतस्य मधुनः प्रस्थ सर्वलेहं विपाचयेत्।

दाडिम्बलेहकं नाम ज्वरातीसारनाशनम्।।
आमरक्तं चाऽऽमशूलं मान्द्यशोफक्षयापहम्।
धातुलीनं धातुगतमश्विभ्यां निर्मितं पुरा।।
इति दाडिमावलेहः। (Y.R. Jvaratisaradhyaya, p. 127)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Dadima	Fr	768 gms
Jala	–	3072 l
Reduced to	–	1/4th
Sharkara	–	768 gms
Shunthi	Rz.	48 gms
Pippalimula	Rt.	48 gms
Maricha	Fr.	48 gms
Dhaniyaka	Fr.	48 gms
Jatiphala	Ar.	48 gms
Jatipatra	Lf.	48 gms
Maricha	Fr.	48 gms
Jiraka	Fr.	48 gms
Tuga	S.C.	48 gms
Vijaya	Bk.	48 gms
Nimba Patra	Lf.	48 gms
Samanga	Pl.	48 gms
Shalmali	St. Bk.	48 gms
Aralu	St.Bk	48 gms
Ativisha	Rt.	48 gms
Patha	Rt.	48 gms
Lavanga	Fl.	48 gms
Honey	–	768 gms
Ghee	–	768 gms

Procedure:

1. Take 768 grams of dadima fruit and add 4 parts of water.
2. Boil the mixture until the water is reduced to one-fourth of its original volume.
3. After boiling, filter the mixture to collect the filtrate, which is the prepared dadima decoction.
4. Add 768 grams of sugar to this decoction and heat it until it reaches a consistency of 2-3 threads (pakalakshana).
5. Then, add 48 grams of the ingredients from Sunthi to Lavanga. Also, add 768 grams of ghee to this mixture.
6. Allow the mixture to cool down and then add honey.
7. Store in air tight container.

Dose: 5-10 gms.

Anupana: Warm Water, Milk.

Indications: Jvaraatisara, Aamavata, Shula, Sopha, Kshaya.

PHARMACODYNAMICS

1. **Antipyretic:** Dadimavaleha exhibits antipyretic properties, helping to reduce fever by lowering body temperature. This action is beneficial in managing conditions characterized by fever, such as infections and inflammatory disorders.
2. **Anti-diarrheal:** The combination of ingredients in Dadimavaleha possesses anti-diarrheal properties, which help alleviate symptoms of diarrhea by reducing bowel motility and fluid loss from the body.
3. **Anti-inflammatory:** Several components of Dadimavaleha, such as Shunthi, Maricha, and Jiraka, possess anti-inflammatory properties. These ingredients help reduce inflammation in the gastrointestinal tract and other tissues, providing relief from conditions like colitis and inflammatory bowel diseases.
4. **Digestive Stimulant:** Dadimavaleha acts as a digestive stimulant, enhancing the digestive fire (Agni) and promoting proper digestion and assimilation of nutrients. This property aids in the management of digestive disorders like indigestion, bloating, and abdominal discomfort.
5. **Immunomodulatory:** The formulation may have immunomodulatory effects, helping to regulate the immune response and strengthen the body's defense mechanisms against infections and diseases.

PHARMACOKINETICS

1. **Absorption:** The active constituents of Dadimavaleha are absorbed from the gastrointestinal tract, where they exert their therapeutic effects.
2. **Distribution:** Once absorbed, the active compounds are distributed throughout the body via the bloodstream, reaching target organs and tissues.
3. **Metabolism:** The ingredients undergo metabolism in the liver, where they may be biotransformed into active metabolites or conjugated with glucuronic acid for elimination.
4. **Excretion:** Metabolites and unmetabolized compounds are primarily excreted through urine and to a lesser extent through bile and feces.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Pharmaceutico-Analytical Study of Dadimavaleha	Vd Manish S. Assistant Professor, Department of Rasashastra and Bhaishajyakalpana, Government Ayurved College, Nagpur, MHA	The study aims to establish a standardized manufacturing procedure for Dadimavaleha by analyzing its pharmaceutico-analytical characteristics. It examines parameters such as pH, total ash, acid insoluble ash, water-soluble extractive, acid-soluble extractive, specific gravity, and sugar content. This research fills a gap in existing protocols and serves as a milestone in setting a standard manufacturing process for Dadimavaleha.
2.	Efficacy of Dadima Avaleha in the Management of Garbhini Pandu with Special Reference to Anaemia in Pregnancy.	Vd Pushkaraj S. Valvi, P.G. Scholar, streerog-prasutitantra, Dept., R.A. Podar Medical College (Ayu.), Worli, Mumbai, MHA, India	The efficacy of Dadimavaleha in treating anaemia during pregnancy underscores the confidence that can be placed in Ayurvedic treatment principles. This case demonstrates the successful application of Ayurvedic diagnosis and treatment, showcasing Dadimavaleha's effectiveness as an appetizer, antiemetic, and diuretic, as well as its ability to improve hemoglobin levels and alleviate hyperacidity.

5.15 Panchagavya Ghrita

Reference: AFI, Part I, Page 90

गोमयस्वरसक्षीरदधिमूत्रैः शृतं हविः ।।
अपस्मारज्वरोन्मादकामलान्तकरं पिबेत् । (A.H.U., 7/18-½)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Gomaya Svarasa	–	3.072 L
Go Dugdha	–	3.072 L
Go Dadhi	–	3.072 Kg
Go Mutra	–	3.072 L
Go Ghrita	–	768 gms

Procedure:

1. **Preparation of Drava Dravya:**
   - Collect the Gomaya Svarasa, Go- Dugdha, Dadhi, and Go- Mutra as mentioned quantity.
2. **Mixing:**
   - In a clean vessel, add Go Ghrita as mention quantity along with Drava Dravya.
3. **Heating:**
   - Place the mixture over a low flame. Stir continuously to prevent the burning and ensure even cooking.
   - Maintain a consistent low flame to avoid burning the ingredients. Heat the mixture until the water content evaporates and sneha siddhi lakshanas.
4. **Filtering:**
   - Once the Sneha siddhi lakshana attains, remove it from the heat.
   - Filter the ghrita through a clean, dry cloth to remove the solid residues of the herbal paste.
5. **Cooling and Storage:**
   - Allow the filtered Ghrita to cool down to room temperature.
   - Store it in a clean, dry, airtight container. Keep the container in a cool, dark place to preserve the potency of the medicated oil or ghee.

Dose: 12 gms.

Anupana: Warm Milk, Warm Water.

Indications: Apasmara, Jvara, Unamada, Kamala.

PHARMACODYNAMICS

1. **Antiepileptic (Apasmara):** Panchagavya Ghrita's antiepileptic properties help manage conditions like epilepsy by stabilizing neuronal activity and reducing the frequency and severity of seizures.
2. **Antipyretic (Jvara):** It acts as an antipyretic agent, reducing fever by modulating the body's temperature-regulating mechanisms and alleviating symptoms associated with pyrexia.
3. **Sedative (Unmada):** Panchagavya Ghrita exhibits sedative effects, calming the mind and central nervous system, which can be beneficial in conditions like hysteria and psychosis.
4. **Hepatoprotective (Kamala):** The formulation may have hepatoprotective properties, protecting the liver from damage and promoting its healthy function. This action is beneficial in managing conditions like jaundice and other liver disorders.

PHARMACOKINETICS

1. **Absorption:** The constituents of Panchagavya Ghrita are absorbed from the gastrointestinal tract, facilitated by the lipid-rich nature of ghee.
2. **Distribution:** Once absorbed, the active components are distributed throughout the body via the bloodstream, reaching target organs such as the brain, liver, and nervous system.

3. **Metabolism**: The ingredients undergo metabolism primarily in the liver, where they may be metabolized into active compounds or undergo conjugation for elimination.
4. **Excretion**: Metabolites and unmetabolized compounds are excreted primarily through bile and feces, with a minor portion excreted via urine.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Panchagavya and Panchagavya Ghrita: A Conceptual study	Ashutosh Pandey, PhD Scholar, Department of Rasa Shastra and Bhaishajya Kalpana, Faculty of Ayurveda, Institute of Medical Sciences, Banaras Hindu University, Varanasi, U.P., India	The study compiles literature on Panchagavya ghrita (PGG) formulations, prepared from five cow products, traditionally used in Ayurveda for treating mental illness. Ayurvedic texts detail its preparation method and recent government publications outline the standard process. Testing parameters for PGG analysis are defined in the Ayurvedic Pharmacopeia of India. Previous research has demonstrated its efficacy in treating CNS disorders, suggesting its potential as a standalone or adjunct therapy with modern medications.
2.	Pharmacodynamic and Pharmacokinetic Interaction of *Panchagavya Ghrita* with Phenytoin and Carbamazepine in Maximal Electroshock Induced Seizures in Rats	Rupa Joshi Department of Pharmacology, All India Institute of Medical Sciences, New Delhi, India	The study found that Panchagavya ghrita (PG) effectively treated seizures in rats induced by maximal electroshock (MES). When combined with sub-therapeutic doses of phenytoin (PHT) and carbamazepine (CBZ), PG enhanced their antiepileptic effects, improved cognitive function, and reduced oxidative stress. This suggests PG's potential as an adjunct therapy in epilepsy, with enhanced efficacy and tolerability.
3.	Physico-Chemical Analysis of Panchagavya Ghrita Prepared as per Ashtanga Hridaya Reference and Comparison with Market Samples	Lakshmi, P.N., PG Scholar, Department of Rasa shastra and Bhaishajya Kalpana, Government Ayurveda College, Thiruvananthapuram, Kerala, India	The study found significant differences in organoleptic characteristics and several physico-chemical parameters between prepared and market samples. While all samples had an acidic pH, differences were observed in iodine value, saponification value, peroxide value, pH, refractive index, and acid value. Specific gravity showed minimal variance between the two groups.
4.	*Panchgavya*: A Precious Gift to Human kind	Komal K. Bajaj Depart of Pharmaceutical Sciences, RTM Nagpur University, Nagpur, Maharashtra, India	Panchagavya, comprising cow-derived products, holds medicinal importance in Ayurveda as 'Cowpathy.' Revered as 'Gaumata,' the cow symbolizes nurturing qualities. Panchagavya treatment offers diverse health benefits with minimal side effects, spanning healthcare, energy, nutrition, poverty alleviation, pollution control, and organic farming. It also enhances soil fertility and crop protection. Scientific validation is crucial for its clinical efficacy.

5.16 Brahmi Ghrita

Reference: AFI, Part I, Page 93

द्वौ प्रस्थौ स्वरसाद् ब्राह्म्या घृतप्रस्थं च साधितम्।।
व्योषश्यामात्रिवृद्दन्तीशङ्खपुष्पीनृपद्रुमैः।
ससप्तलाकृमिहरैः कल्कितैरक्षसम्मितैः।।
पलवृद्ध्या प्रयुञ्जीत परं मात्रा चतुष्पलम्।
उन्मादकुष्ठापस्मारहरं वन्ध्यासुतप्रदम्।।
वाक् स्वरस्मृतिमेधाकृद् धन्यं ब्राह्मीघृतं स्मृतम्।

(A.H.U., 6/23-25½)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Brahmi Svarasa	Pl.	1.536 L
Ghrita	–	768 gms
Shunthi	Rz.	12 gms
Maricha	Fr.	12 gms
Pippali	Fr.	12 gms
Trivrit	Rt.	12 gms
Danti	Rt.	12 gms
Shankapushpi	Pl.	12 gms
Aragavadha	Fr. P.	12 gms
Saptala	Pl.	12 gms
Vidanga	Fr.	12 gms

Procedure:

1. **Preparation of Kalka Dravya:**
   - Take all the ingredients for Kalka Dravya (Shunthi to Vidanga) and grind them into a fine powder (Churna).
   - Add a sufficient quantity of water to the powdered herbs to make a thick paste (bolus form).
2. **Preparation of Drava Dravya:**
   - Prepare the Brahmi Svarasa as per classical references.

3. **Mixing:**
   - In a clean vessel, add Go-Ghrita as mention quantity along with Kalka Dravya and Drava Dravya.
4. **Heating:**
   - Place the mixture over a low flame. Stir continuously to prevent the Kalka from sticking to the bottom and ensure even cooking.
   - Maintain a consistent low flame to avoid burning the ingredients. Heat the mixture until the water content evaporates and sneha siddhi lakshanas.
5. **Filtering:**
   - Once the Sneha siddhi lakshana attains, remove it from the heat.
   - Filter the ghrita through a clean, dry cloth to remove the solid residues of the herbal paste.
6. **Cooling and Storage:**
   - Allow the filtered Ghrita to cool down to room temperature.
   - Store it in a clean, dry, airtight container. Keep the container in a cool, dark place to preserve the potency of the medicated oil or ghee.

Dose: 12 gms.

Anupana: Warm Milk, Warm water.

Indications: Apasmara, Unmada, Vandhyatva, Kushtha, Vakshvara Bhanga, Smriti Kshaya, Buddhi Daurbalya.

PHARMACODYNAMICS

1. **Nootropic (Buddhi Daurbalya, Smriti Kshaya):** Brahmi Ghrita's primary action involves enhancing cognitive functions such as learning, memory, and concentration. It may achieve this by modulating neurotransmitter levels, promoting neurogenesis, and protecting neurons from oxidative damage.
2. **Antiepileptic (Apasmara):** The formulation may exert antiepileptic effects by stabilizing neuronal membranes, reducing neuronal excitability, and regulating neurotransmitter release, thereby reducing the frequency and severity of seizures.
3. **Antipsychotic (Unmada):** Brahmi Ghrita's antipsychotic properties help manage conditions like hysteria and psychosis by balancing neurotransmitter levels in the brain and calming excessive neuronal activity.
4. **Galactagogue (Vandhyatva):** It may stimulate prolactin release and promote lactation in nursing mothers, thereby addressing conditions of infertility or low milk supply.
5. **Anti-inflammatory (Kushtha):** The formulation may possess anti-inflammatory properties, which can help alleviate symptoms associated with skin disorders like eczema and dermatitis.
6. **Speech Improvement (Vakshvara Bhanga):** Brahmi Ghrita's use in speech disorders may be attributed to its ability to improve neuronal coordination and enhance speech-related brain functions.

PHARMACOKINETICS

1. **Absorption:** The lipid-based formulation facilitates the absorption of active constituents, especially fat-soluble compounds, from the gastrointestinal tract.
2. **Distribution:** Once absorbed, the active ingredients are distributed throughout the body, including the brain, where they exert their effects on cognitive and neurological functions.
3. **Metabolism:** Metabolism of the components may occur primarily in the liver, where they are broken down into metabolites that may contribute to the observed therapeutic effects.
4. **Excretion:** Metabolites and unutilized constituents are excreted mainly through bile and feces, with a minor portion eliminated via urine.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Standardization of Brahmi Ghrita with Special Reference to Its Pharmaceutical Study	Yadav, Kapil Deo, Junior Resident, Department of Rasa Shastra, Faculty of Ayurveda IMS, BHU, Varanasi, U.P.	Three batches of Brahmi Ghrita were made, each using Brahmi Svarasa Kalka, comprising powdered Vacha, Kushtha, Shankhapushpi, and Brahmi, was mixed with Brahmi Svarasa. Murchchhana was performed before use as Sneha dravya. The Ghrita was prepared over three days at mild heat, with temperature and Siddhi lakshana recorded.
2.	Critical Review on Effect of Brahmi Ghrita in Psychiatric Disorders	Prabhakar Manu, PG Scholar, Department of Mano Vijyan evam Manasa Roga, Shri Dharmasthala Manjunatheshwara College of Ayurveda & Hospital, Hassan, Karnataka, India	Brahmi Ghrita is extensively used for psychiatric disorders internally and externally. Its lipophilic nature suggests it may have a significant impact on the blood-brain barrier. However, research on its potential neuroplasticity, nootropic, and neuroprotective effects is lacking. Further exploration could revolutionize psychiatry, given its minimal side effects and palatability.

Sr.No.	Article Name	Author Name	Result
3.	Analytical profile of *Brahmi Ghrita*: A Polyherbal Ayurvedic Formulation	Jyoti S. Gubbannavar, PG Scholar, Department of Roga Nidana and Vikriti Vijnana, Institute for Post Graduate Teaching and Research in Ayurveda, Gujarat Ayurved University, Jamnagar, Gujarat, India	The study focuses on the pharmacognostical identification and physico-chemical analysis of Brahmi Ghrita. Organoleptic features of the coarse powder met prescribed standards. Physico-chemical analysis revealed an acid value of saponification value of Refractive Index of at room temperature, Iodine value of and Specific gravity of at room temperature. HPTLC analysis identified up to distinct spots with mostly identical Rf values in the alcoholic extract, indicating the presence of specific constituents in Brahmi Ghrita.
4.	Analytical Study of Brahmi Ghrita	Dr. Srinibash Sahoo, Research Officer (Ay), Scientist-2, ACAMHNS (CCRAS), NIMHANS, Bangalore, Ph.D. Scholar, Karnataka	Analytical studies confirm the safety of Brahmi Ghrita from Gopabandhu Ayurveda Mahavidyalaya, Puri, Orissa, for the current trial. Selected based on its properties, it aims to treat Kaphaja Unmada (Depressive Illness) and document its efficacy.
5.	Role of Brahmi Ghrita Lehana in Cerebral Palsy	Dr. A. P. Rana, Assistant Professor in Kaumarbhritya, GAC, Osmanabad, MHA	Brahmi Ghrita, first mentioned in the Charaka Samhita, has been adapted over time by various Acharyas to suit patient needs, diseases, and contextual factors Acharya Kashyapa noted its cognitive-enhancing properties in Lehana karma. Traditionally taken with honey before food, it has been studied for its effects on learning, memory, epilepsy, CNS depression, memory impairment, pain relief, depression, and ADHD in children, with a focus on its neurocognitive benefits.

5.17 Narayana Taila

Reference: AFI, Part I, Page 138

विल्वाग्निमन्थश्योनाकपाटलापारिभद्रकम्।
प्रसारण्यश्वगन्धा च वृहती कण्टकारिका।।
बला चातिबला चैव श्वदंष्ट्रा सपुनर्नवा।
एषां दशपलान् भागांश्चतुर्दोणेऽम्भसः पचेत्।।
पादशेषं परिस्राव्य तैलपात्रं प्रदापयेत्।
शतपुष्पा देवदारु मांसी शैलेयकं वचा।।
चन्दनं तगरं कुष्ठमेला पर्णीचतुष्टयम्।
रास्ना तुरगगन्धा च सैन्धवं सपुनर्नवम्।।
एषां द्विपलिकान् भागान् पेषयित्वा विनिक्षिपेत्।
शतावरीरसञ्चैव तैलतुल्यं प्रदापयेत्।।
आजं वा यदि वा गव्यं क्षीरं दद्याच्चतुर्गुणम्।
पाने वस्तौ तथाऽभ्यङ्गे भोज्ये चैव प्रशस्यते।।
अश्वो वा वातभग्नो वा गजो वा यदि वा नरः।
पङ्गुश्च पीठसर्पी च तैलेनानेन सिद्ध्यति।।
अधोभागे ये च वाताः शिरोमध्यगताश्च ये।
मन्यास्तम्भे हनुस्तम्भे दन्तरोगे गलग्रहे।।
यस्य शुष्यति चौकाङ्गं गतिर्यस्य च विह्वला।
क्षीणेन्द्रियाः क्षीणशुक्रा ज्वरक्षीणाश्च ये नराः।।
बधिरा लल्लजिह्वाश्च मन्दमेधस एव च।
अल्पप्रजा च या नारी या च गर्भं न विन्दति।।
वातार्त्तौ वृषणौ येषामन्त्रवृद्धिश्च दारुणा।
एतत्तैलवरं तेषां नाम्ना नारायणं मतम्।।

(B.R. Vatavyadhi., 26/140–150)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Bilva	Rt./ St. Bk.	480 gms
Agnimantha	Rt./ St. Bk.	480 gms
Shyonaka	Rt./ St. Bk.	480 gms
Patala	Rt./ St. Bk.	480 gms
Paribhadra	St. Bk.	480 gms
Prasarini	Pl.	480 gms
Ashvagandha	Rt.	480 gms
Brihati	Pl.	480 gms
Kantakari	Pl.	480 gms
Bala	Rt.	480 gms
Atibala	Rt.	480 gms
Svadamshtra	Pl.	480 gms
Punarnava	Rt.	480 gms
Water for Decoction	–	49.152 L
Reduced to	–	12.288L
Tila Taila	Ol.	3.072 Kg
Shatapusha	Fr.	96 gms
Devadaru	Ht. Wd.	96 gms
Jatamansi	Rt.	96 gms
Shaileya	Pl.	96 gms
Vacha	Rz.	96 gms
Chandana	Ht. Wd.	96 gms
Tagara	Rt.	96 gms
Kushtha	Rt.	96 gms
Ela	Sd.	96 gms
Shalaparni	Pl.	96 gms
Prishniparni	Pl.	96 gms
Mudgaparni	Pl.	96 gms

Drug Name	Part Used	Proportion
Mashaparni	Pl.	96 gms
Rasna	Rt.	96 gms
Ashvagandha	Rt.	96 gms
Saindhava Lavana	–	96 gms
Punarnava	Rt.	96 gms
Shatavari	Rt. Tr.	3.072 L
Go Dugdha	–	12.288 L

Procedure:

1. **Preparation of Kalka Dravya:**
   - Take all the ingredients for Kalka Dravya (Shatapushpa to Punarnava) and grind them into a fine powder (Churna).
   - Add a sufficient quantity of water to the powdered herbs to make a thick paste (bolus form).
2. **Preparation of Drava Dravya:**
   - Prepare the kvatha, by adding kvatha dravya from Bilva to Punarnava as per classical references.
   - Prepare the Shatavari Kvatha as per classical reference.
   - Take also Go - Dugdha as dravadravya.
3. **Mixing:**
   - In a clean vessel, add Tilataila as mention quantity along with Kalka Dravya and Drava Dravya.
4. **Heating:**
   - Place the mixture over a low flame. Stir continuously to prevent the Kalka from sticking to the bottom and ensure even cooking.
   - Maintain a consistent low flame to avoid burning the ingredients. Heat the mixture until the water content evaporates and sneha siddhi lakshanas.
5. **Filtering:**
   - Once the Sneha siddhi lakshana attains, remove it from the heat.
   - Filter the taila through a clean, dry cloth to remove the solid residues of the herbal paste.
6. **Cooling and Storage:**
   - Allow the filtered taila to cool down to room temperature.
   - Store it in a clean, dry, airtight container. Keep the container in a cool, dark place to preserve the potency of the medicated oil or ghee.

Dose: 6 gms, externally used for Nasya, Abhayanga and Anuvasana also.

Anupana: Warma Water, Milk.

PHARMACODYNAMICS

1. **Anti-inflammatory:** Narayana Taila contains herbs like Bilva, Agnimantha, Shyonaka, Patala, and Paribhadra, which possess potent anti-inflammatory properties. These ingredients help alleviate inflammation associated with various conditions such as joint pain, arthritis, and inflammatory disorders.
2. **Analgesic:** The combination of Prasarini, Ashvagandha, Brihati, Kanthakari, Bala, and Atibala provides analgesic effects, helping to relieve pain and discomfort. This is beneficial for conditions like arthritis, muscular pain, and neuralgia.
3. **Muscle Relaxant:** Certain herbs like Ashvagandha and Bala act as muscle relaxants, reducing muscle stiffness and spasms. This property is useful in conditions characterized by muscular tension and rigidity.
4. **Nervine Tonic:** Jatamamsi, Tagara, and Vaca present in Narayana Taila act as nervine tonics, supporting the nervous system's health and function. They help calm the nerves, reduce stress, and improve overall mental well-being.
5. **Anti-arthritic:** Punarnava possesses anti-arthritic properties, which help alleviate symptoms associated with arthritis, such as joint pain, swelling, and stiffness. It also aids in improving joint mobility and flexibility.

PHARMACOKINETICS

1. **Topical Absorption:** When applied externally, Narayana Taila is absorbed through the skin, allowing its active constituents to exert their pharmacological effects locally on the affected area.
2. **Local Action:** The herbal components of Narayana Taila act locally on the muscles, joints, and nerves, providing relief from pain, inflammation, and stiffness.
3. **Metabolism:** Metabolism of the absorbed compounds may occur locally in the skin or systemically in the liver, depending on the nature of the ingredients.
4. **Elimination:** Any metabolites or unutilized constituents are eliminated primarily through the skin or may undergo hepatic metabolism and subsequent excretion via urine or feces.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Narayana Taila: A Classical Overview	Dr. Shalini Patel, M.S. Scholar, Final year, P.G. Dept. of Shalya Tantra, Rishikul Campus, Haridwar, Uttarakhand	Narayana Taila, described by different Acharyas, consists of 33 ingredients documented in texts like Yogaratnakara and Sharangadhara. It's named after Lord Vishnu.

Sr.No.	Article Name	Author Name	Result
		Ayurved University, Haridwar, Uttarakhand	reflecting its potency in curing diseases. Used primarily to alleviate vitiated Vata dosha, this article aims to compile a comprehensive overview of its uses and indications.
2.	Conceptual Study of Narayana Taila Nasya in the Management of Manyastambha	Bhusal Nirmal, PG Scholar Dept. of Panchakarma, College of Ayurved, Bharti Vidhapeeth Deemed University, Pune-43, MHA, India	Narayana Taila Nasya is a suitable treatment for Manyastambha. The alleviation of cardinal signs such as pain and stiffness in Manyastambha can be effectively achieved.

5.18 Nilibhringadi Taila

Reference: AFI, Part I, Page 139

नीलीभृङ्गलताशतक्रतुलताधात्रीफलानां रसे।
क्षीरैराजकनालिकेरमहिषीधेनूद्भवैस्साधितम्।
तैलं तत्पचमेव पिष्टलुलितैर्यष्ट्याह्वगुञ्जाञ्जनैः
केशान् सञ्जनयेत्तलेऽपि करयोरास्तामकेशं शिरः।।

(Sahasrayoga, Tail. 38)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Nili Svarasa	Lf.	768 ml
Bhringaraja Svarasa	Pl.	768 ml
Shatakratulata	Pl.	768 ml
Amalaki	P.	768 ml
Ajakshira	–	768 ml
Narikela Kshira	Kr.	768 ml
Mahishi Kshira	–	768 ml
Go Dugdha	–	768 ml
Tila Taila	Ol.	768 ml
Yashti	Rt.	32 gms
Gunja Mula	Rt.	32 gms
Daruharidra	St. Ext.	32 gms

Procedure:

1. **Preparation of Kalka Dravya:**
   - Take all the ingredients for Kalka Dravya (Yashti to Daruharidra) and grind them into a fine powder (Churna).
   - Add a sufficient quantity of water to the powdered herbs to make a thick paste (bolus form).
2. **Preparation of Drava Dravya:**
   - Prepare the Nili Svarasa, Bhringaraja Svarasa, Shatakratulata and Amalaki Svarasa as per classical refernces.
   - Collect the Ajakshira, Narikela Kshira, Mahishi Kshira, Go-Dugdha as dravadravya.
3. **Mixing:**
   - In a clean vessel, add Tilataila as mention quantity along with Kalka Dravya and Drava Dravya.
4. **Heating:**
   - Place the mixture over a low flame. Stir continuously to prevent the Kalka from sticking to the bottom and ensure even cooking.
   - Maintain a consistent low flame to avoid burning the ingredients. Heat the mixture until the water content evaporates and sneha siddhi lakshanas.
5. **Filtering:**
   - Once the Sneha siddhi lakshana attains, remove it from the heat.
   - Filter the taila through a clean, dry cloth to remove the solid residues of the herbal paste.
6. **Cooling and Storage:**
   - Allow the filtered taila to cool down to room temperature.
   - Store it in a clean, dry, airtight container. Keep the container in a cool, dark place to preserve the potency of the medicated oil or ghee.

Dose: Externally for Sirobhyanga.

Indications: - Keshapata, Palita.

PHARMACODYNAMICS

1. **Hair Growth Stimulant**: Nilibhringadi Taila contains potent hair growth stimulants like Bhringaraja, which promote hair growth and improve hair texture. These herbs nourish the hair follicles, strengthen the roots, and prevent hair fall, thereby promoting the growth of healthy hair.
2. **Scalp Nourishment**: Ingredients like Nili Svarasa, Shatakratulata, and Amalaki are rich in nutrients and antioxidants. They nourish the scalp, improve blood circulation to the hair follicles, and rejuvenate the scalp tissues, promoting overall scalp health.
3. **Hair Pigmentation**: The formulation includes herbs like Yashti and Gunja Mula, which may help restore natural hair colour by stimulating melanin production in the hair follicles. This property is beneficial in conditions like premature graying of hair (Palita).
4. **Anti-inflammatory**: Daruharidra present in Nilibhringadi Taila possesses anti-inflammatory properties, which help soothe the scalp, reduce itching, and alleviate scalp conditions like dandruff and scalp inflammation.

5. **Moisturizing:** Coconut milk (Narikela Kshira) and buffalo milk (Mahishi Kshira) present in the formulation act as natural moisturizers. They hydrate the scalp and hair prevent dryness, and promote healthy hair growth.

PHARMACOKINETICS

1. **Topical Absorption:** Nilibhringadi Taila is applied externally to the scalp (Shirobhyanga). The active constituents are absorbed through the skin and penetrate the hair follicles, exerting their therapeutic effects locally.
2. **Local Action:** The herbal extracts present in the oil act locally on the scalp and hair follicles, providing nourishment, promoting hair growth, and improving hair health.
3. **Metabolism:** Any absorbed compounds may undergo local metabolism within the scalp tissues. Some constituents may also be absorbed systemically and undergo hepatic metabolism.
4. **Elimination:** Metabolites or unutilized constituents are likely eliminated through the skin or may undergo hepatic metabolism and subsequent excretion via urine or feces.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Review on Nilibhringadi Taila: An Effective Keshya Medication	Vashishtha, PG Scholar, Dept. of RSBK, National Institute of Ayurveda, Deemed to be University, Jaipur, Rajasthan, India.	Nilibhringadi Taila is a widely used Ayurvedic herbal oil in India, renowned for enhancing hair quality, treating split ends, preventing premature greying, and addressing baldness. Its ingredients are potent hair growth promoters, yet further research is needed to expand our understanding of its efficacy and potential.

5.19 Panchaguna Taila

Reference: AFI, Part II, Page 145, Siddhayogasangraha, Vatarogadhikara; Adhyaya 20/17)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Haritaki	P.	60 gms
Amalaki	P.	60 gms
Bibhitaki	P.	60 gms
Nimba Patra	Lf.	180 gms
Nirgundi Patra	Lf.	180 gms
Water for Decoction	–	4.320 L
Reduced to	–	1.080 L
Tila Taila	Ol.	960 ml
Madhuchchhishta	–	48 gms
Sarala	Resin	48 gms
Shila Rasa	Exd.	48 gms
Rala	Exd.	48 gms
Shuddha Guggulu	Exd.	48 gms
Karpura	–	60 gms
Tarapina Taila	–	30 ml
Nilagiri Taila	–	30 ml
Kejoputi Taila	–	30 ml

Procedure:

1. **Preparation of Kvatha:**
   - Take Haritaki, Vibhitaki, Amalaki, Nimba, and Sambhalu.
   - Add about 4.320 liters of water to these ingredients.
   - Boil the mixture until it is reduced to 1.080 liters.
2. **Preparation of Kalka:**
   - Take 48 grams each of Madhucchhishta, Gandhaphiroja, Shilarasa, Rala, and Guggulu.
   - Grind these ingredients into a fine paste.
3. **Mixing and Boiling:**
   - Mix the prepared herbal kalka with the decoction.
   - Boil the mixture until all moisture is evaporated, leaving behind the medicated oil.
4. **Filtering:**
   - Filter the taila to remove any solid residues from the kalka.
5. **Adding Essential Oils:**
   - Add Eucalyptus oil and Turpentine oil to the filtered oil.
6. On self-cooling, also add **Karpura.**
7. Stir the mixture well to ensure all ingredients are thoroughly **combined.**

Dose: External use only.

Indications: Sandhivata, Karna shula, Vranaopachara.

Since Panchaguna Taila is intended for external use only, its pharmacodynamics and pharmacokinetics would primarily involve the interactions of its components with the skin and underlying tissues.

PHARMACODYNAMICS

1. **Skin Penetration:** The active constituents of Panchaguna Taila, such as Haritaki, Amalaki, Bibhitaki,

Nimba Patra, and Nirgundi Patra, may penetrate the skin barrier and exert pharmacological effects locally.

2. **Anti-inflammatory Activity:** Components like Nirgundi Patra and Nimba Patra may possess anti-inflammatory properties, which can help alleviate inflammation associated with conditions like Sandhivata (osteoarthritis) and Vrana (wound).
3. **Analgesic Effects:** The formulation may provide analgesic effects due to the presence of ingredients with pain-relieving properties, potentially beneficial in conditions like Karna shula (earache).

PHARMACOKINETICS

1. **Absorption:** The lipophilic nature of oils like Tila Taila and essential oils (Tarapina Taila, Nilagiri Taila, Kejoputi Taila) facilitates the absorption of active constituents through the skin.
2. **Distribution:** Once absorbed, the active compounds distribute locally within the tissues near the site of application, exerting their effects.
3. **Metabolism:** The metabolism of externally applied oils and plant extracts on the skin is limited compared to systemic metabolism in the body.
4. **Elimination:** Since the formulation is applied externally, any systemic absorption of its constituents may undergo metabolism in the liver and eventual elimination via urine or feces.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Pharmaceutical Standardization of Panchaguna Taila (Medicated oil) and Product Development as Ointment, Gel, Cream, and Physiowax	Sveta Kumari, Department of Ayurvedic Pharmacy, School of Pharmaceutical Sciences, Lovely Professional University, Punjab - 144411, India	Physicochemical parameters were consistent over 24, 48, and 72 hours for PGT. PGT ointment, gel, cream, and physiowax formulations, containing PGT with various excipients, are easily applied over affected areas. Rf values ranged from 0.21 to 0.84. PGT, ointment, and physiowax exhibited 10 spots, while gel and cream had 7, potentially due to excipients. This hints at the possibility of developing alternative PGT dosage forms for improved convenience, addressing issues like staining and sticking.

5.20 Aravindasava

Reference: AFI, Part I, page 7

अरविन्दमुशीरञ्च काश्मर्रीं नीलमुत्पलम्।
मंजिष्ठैला वलामांसीरम्बुदं शारिवां शिवाम्।।
विभीतकवचाधात्रीः शटीं श्यामां सनीलिनीम्।
पटोलं पर्पटं पार्थं मधूकं मधुकं मुराम्।।
पलमानेन संगृह्य द्राक्षायाः पलविंशतिम्।
धातकीं षोडशपलां जलद्रोणद्वये क्षिपेत्।।
शर्करायास्तुलां तत्र तुलार्द्धं माक्षिकस्य च।
मासं संस्थापयेद् भाण्डे मृत्तिकापरिनिर्मिते।।
बालानां सर्वरोगघ्नो बलपुष्ट्यग्निवर्द्धनः।
अरविन्दासवः प्रोक्त आयुष्यो ग्रहदोषहृत्।।

(B.R., Balaroga., 17/185-189)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Kamala	Fl.	48 gms
Ushira	Rt.	48 gms
Gambhari	Fr.	48 gms
Utpala	Fl.	48 gms
Manjishtha	Rt.	48 gms
Ela	Sd.	48 gms
Bala	Rt.	48 gms
Jatamansi	Rz.	48 gms
Musta	Rz.	48 gms
Shveta Sariva	Rt.	48 gms
Haritaki	P.	48 gms
Bibhitaki	P.	48 gms
Vacha	Rz.	48 gms
Amalaki	P.	48 gms
Sati	Rz.	48 gms
Trivrit	Rt.	48 gms
Nili	Lf.	48 gms
Patola	Pl.	48 gms
Parpata	Pl.	48 gms
Arjuna	St. Bk.	48 gms
Madhuka	Fl.	48 gms
Yashti	Rt.	48 gms
Mura	Rt.	48 gms
Draksha	Dr. Fr.	960 gms
Dhatari	Fl.	768 gms
Water	–	24.576 l
Sharkara	–	4.800 Kg
Madhu	–	2.400 kg

Procedure:

1. Prepare a coarse powder of all the dravyas.
2. Take a Sandhana Patra (fermentation vessel) and smear it with Sarshapa (mustard) oil. Pour the water into the Sandhana Patra.

3. Add Melted Guda (jaggery), Madhu, along with all the remaining dravyas in the form of Yavakuta Churna (coarse powder).
4. Close the Sandhana Patra with Sandhi-bandhana (sealing the lid) and allow the mixture to ferment properly.
5. Once it attain sandhana lakshana, then filter the final product.
6. Store it in a clean, dry, airtight container. Keep the container in a cool, dark place to preserve the potency.

Dose: 3 to 12 ml.

Indications: Agnimandya, Karshya, Balakshaya, Sarva Balaroga, Graha Dosha.

PHARMACODYNAMICS

1. **Nutritive and Rejuvenating:** Aravindasava is rich in various herbal ingredients like Kamala, Ushira, Gambhari, Bala, and others, which are known for their nutritive and rejuvenating properties. These components help in nourishing the body tissues, promoting growth, and enhancing vitality.
2. **Digestive Stimulant:** Ingredients such as Haritaki, Bibhitaki, Amalaki, and Musta possess digestive stimulant properties, which aid in improving appetite, digestion, and assimilation of nutrients. This action is particularly beneficial in conditions like Agnimandya (digestive impairment).
3. **Immunomodulatory:** Some herbs present in Aravindasava, like Manjishtha, Jatamansi, and Shveta Sariva, exhibit immunomodulatory effects. They help in enhancing the body's defense mechanisms, thereby providing protection against various infections and diseases.
4. **Anti-inflammatory and Antioxidant:** Certain constituents like Arjuna and Patola have anti-inflammatory and antioxidant properties, which can help in reducing inflammation, oxidative stress, and associated tissue damage.
5. **Tonic and Restorative:** The formulation acts as a tonic and restorative, promoting overall well-being, strength, and vitality. It is particularly beneficial in conditions of Karshya (emaciation) and Balakshaya (loss of strength).

PHARMACOKINETICS

1. **Absorption:** The aqueous extract of Aravindasava allows for the efficient absorption of active constituents through the gastrointestinal tract.
2. **Metabolism:** Once absorbed, the herbal components undergo metabolism in the liver and other tissues, where they are broken down into metabolites.
3. **Distribution:** The metabolites are then distributed to various target tissues and organs, where they exert their pharmacological effects.
4. **Elimination:** Metabolites and any unabsorbed constituents are eliminated primarily via urine and feces.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Experimental Studies on the Fermentation of Aravindasava	Muzaffer Alam, Captain Srinivasa Murti Drug Research Institute For Ayurveda, Arumbakkam, Madras – 600106, T.N., India	Aravindasava was prepared using traditional and modified methods. The modified approach, using a glass vessel and ino Aulation with yeasts from Dashamularishta and Pippaliasava, resulted in higher alcohol production compared to the classical earthen pot method. Dashamularishta yeast II showed the highest alcohol production among the inoculated organisms. Variations in the utilization of sugars were observed across different preparation methods.

5.21 Ashokarishta

Reference: AFI, Part I, page 8

अशोकस्य तुलामेकाञ्चतुर्दोणे जले पचेत्।
पादशेषे रसे पूते शीते पलशतद्वयम्।।
दद्याद् गुडस्य धातक्याः पलषोडशिकं मतम्।
अजाजी मुस्तकं शुण्ठीं दार्व्युत्पलफलत्रिकम्।।
आम्रास्थि जीरकं वासां चन्दनञ्च विनिक्षिपेत्।
चूर्णयित्वा पलांशेन ततो भाण्डे निधापयेत्।।
मासादूर्ध्वञ्च पीत्वैनमसृग्दररुजां जयेत्।
ज्वरञ्च रक्तपित्तार्शो मन्दाग्नित्वमरोचकम्।।
मेहशोथारुचिहरस्त्वशोकारिष्टसंज्ञितः।।

(B.R., Striroga., 66/114-118)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Ashoka	Fl.	4.800 kg
Water for Decoction	–	49.152 L
Reduced to	–	12.288 l
Guda	–	9.600 Kg

Drug Name	Part Used	Proportion
Dhataki	Fl.	768 gms
Shveta Jiraka	Fr.	48 gms
Musta	Rz.	48 gms
Shunthi	Rz.	48 gms
Daruharidra	St.	48 gms
Utpala	Fl.	48 gms
Haritaki	P.	48 gms
Bibhitaki	P.	48 gms
Amalaki	P.	48 gms
Amra	(Emn.)	48 gms
Shveta Jiraka	Fr.	48 gms
Vasa	Rt.	48 gms
Shveta Candana	Ht. Wd.	48 gms

Procedure:

1. Prepare a coarse powder of all the dravyas
2. Add water to the Ashoka coarse powders and soak the mixture overnight.
3. The next morning, add 50 liters of water to the soaked mixture.
4. Boil the mixture and reduce it to one-fourth of its original volume and filter the kvatha (decoction).
5. Take a Sandhana Patra (fermentation vessel) and smear it with Sarshapa (mustard) oil. Pour the filtered kvatha into the Sandhana Patra.
6. Add melted Guda (jaggery) to the kwatha, along with all the remaining dravyas in the form of Yavakuta Churna (coarse powder).
7. Close the Sandhana Patra with Sandhi-bandhana (sealing the lid) and allow the mixture to ferment properly.
8. Once it attain sandhana lakshana, then filter the final product.
9. Store it in a clean, dry, airtight container. Keep the container in a cool, dark place to preserve the potency.

Dose: 12 to 24 ml.

Indications: Asrigdara Ruja, Yoniruja, Shveta Pradara, Jvara, Raktapitta, Arsha, Mandagni, Arochaka, Meha, Shotha.

Pharmacodynamics

1. **Hemostatic**: Ashokarishta contains Ashoka flowers, which are renowned for their hemostatic properties. This action helps in managing conditions like Asrigdara Ruja (painful menstruation) and Yoniruja (uterine disorders).
2. **Anti-inflammatory**: Ingredients such as Daruharidra possess potent anti-inflammatory properties, which aid in reducing inflammation associated with various conditions like Shveta Pradara (leucorrhea), Arsha (piles), and Shotha (inflammation).
3. **Digestive Stimulant**: Compounds like Shunthi and Shveta Jiraka act as digestive stimulants, enhancing digestive fire (Agni) and thereby improving digestion (Mandagni).
4. **Antipyretic**: The formulation exhibits antipyretic properties, which help in reducing fever (Jvara) by lowering body temperature.
5. **Astringent and Uterine Tonic**: Ashoka flowers have astringent properties, beneficial in conditions like Shveta Pradara. Additionally, Ashokarishta acts as a uterine tonic, promoting uterine health and regulating menstrual flow.

Pharmacokinetics

1. **Absorption**: The water-based decoction of Ashoka flowers allows for efficient absorption of active constituents in the gastrointestinal tract.
2. **Metabolism**: Once absorbed, the herbal components undergo metabolism in the liver and other tissues, where they are metabolized into active compounds.
3. **Distribution**: The active compounds are then distributed throughout the body, reaching target organs such as the uterus, digestive system, and blood vessels.
4. **Elimination**: Metabolites and any unutilized constituents are primarily eliminated via urine and feces.

Research Updates

Sr.No.	Article Name	Author Name	Result
1.	Review on Quality Evaluation of Ashokarishta: An Ayurvedic Formulation	Soumya S. Fadnis, IInd Yearn P.G. Scholar, Dept. of Rasashastra & Bhaishajya Kalpana, KLE Shri BMK Ayurveda Mahavidyalaya & PAGE Research Centre, a constituent unit of KAHER, Belagavi, Karnataka, India	Ashokarishta, a traditional alcoholic preparation, is renowned for its efficacy in treating gynecological disorders. This review article highlights the importance of quality control parameters in ensuring its safety and effectiveness. By examining various analytical methods, it underscores the formulation's reliability and versatility. Quality control measures authenticate raw materials, validate preparation methods, and affirm therapeutic efficacy, bolstering confidence in Ashokarishta's utility.

Sr.No.	Article Name	Author Name	Result
2.	Quality Assessment of Different Marketed Brands of Ashokarishta: An Ayurvedic Formulation	Akhilesh K. Mishra, Smt. Vidyawati College of Pharmacy, Jhansi, U.P., India.	Stricter quality control is needed for traditional herbal medicines. This study emphasizes the importance of standardized procedures and quality parameters for formulations like Ashokarishta. Adherence to global guidelines is crucial for ensuring safety and efficacy. Manufacturers must ensure product quality, while regulatory bodies must implement stringent policies.
3.	Standardization of Different Marketed Brands of Ashokarishta: An Ayurvedic Formulation	Tekeshwar Kumar, University Institute of Pharmacy, Pt. Ravishankar Shukla University, Raipur - 492010, Chhattisgarh, India	The study aimed to assess various formulations of Ashokarishta, examining four different marketed brands. Organoleptic properties such as color, odor, and taste were evaluated, alongside physicochemical parameters including pH, specific gravity, viscosity, density, surface tension, alcohol content, and total solid content. This comprehensive analysis sought to establish a routine procedure for standardizing these Ayurvedic formulations.

5.22 Kumaryasava

Reference: AFI, Part I, page 10

कुमार्याश्च रसद्रोणे गुडं पलशतं तथा।
तुलाङ्घ्रि सङ्ख्यां विजयां क्वाथयेत्तज्जलार्मणे।।
चतुर्थांशावशेषे तु पूते तस्मिन्निधापयेत्।
मधुनश्चाऽऽढकं दत्त्वा धातक्या द्विपलाष्टकम्।।
स्निग्धभाण्डे विनिक्षिप्य कल्कं चैव प्रदापयेत्।
जातीफलं लवङ्गं च कङ्कोलं च कबावकम्।।
जटिलाचव्यचित्रं च जातिपत्री सकर्कटम्।
अक्षं पुष्करमूलं च प्रत्येकं च पलं पलम्।।
मृतं शुल्वं तथा लोहं शुक्तिमात्रं प्रदापयेत्।

(Y.R. Gulma, p. 527)

Ingredients Used

Drug Name	Part Used	Proportion
Kumari	Lf.	12.288 L
Guda	–	4.800 Kg
Haritaki	P.	1.200 kg
Water for Decoction	–	12.288 L
Reduced to	–	3.072 L
Madhu	–	3.072 L
Dhataki	Fl.	768 Gms
Jatiphala	Sd.	48 gms
Lavanga	Fl. Bd.	48 gms
Kankola	Fr.	48 gms
Kababaka	Fr.	48 gms
Jatamansi	Rt.	48 gms
Chavya	St.	48 gms
Eranda	Rt.	48 gms
Jatiphala	Ar.	48 gms
Karkatashringi	Gl.	48 gms
Bibhitaki	P.	48 gms
Pushkara	Rt.	48 gms
Tamra Bhasma	–	48 gms
Lauha Bhasma	–	24gms

Procedure:

1. Prepare a coarse powder of all the dravyas except draksha.
2. Add water to the Kutaja coarse powders and soak the mixture overnight.
3. Take a vessel add draksha along with quantity sufficient water. Soak for 3- 4 hrs. Grind it properly and to form paste of draksha
4. The next morning, add 50 liters of water to the soaked mixture.
5. Boil the mixture and reduce it to one-fourth of its original volume and filter the kvatha (decoction).
6. Take a Sandhana Patra (fermentation vessel) and smear it with Sarshapa (mustard) oil. Pour the filtered kwathaalong with pulp of draksha into the Sandhana Patra.
7. Add melted Guda (jaggery) to the kvatha, along with all the remaining dravyas in the form of Yavakuta Churna (coarse powder).
8. Close the Sandhana Patra with Sandhi-bandhana (sealing the lid) and allow the mixture to ferment properly.
9. Once it attain sandhana lakshana, then filter the final product.
10. Store it in a clean, dry, airtight container. Keep the container in a cool, dark place to preserve the potency.

Dose: 12 to 24 ml.

Indications: Gulma, Kasa, Shvasa, Arsha, Vata Vyadhi, Apasmara, Kshaya, Udara, Manyaroga, Agnimandya, Koshtha Shula, Nasta Pushpa.

Pharmacodynamics

1. **Digestive Stimulant:** Kumaryasava contains ingredients like Haritaki, which acts as a digestive stimulant, enhancing appetite and improving digestion. This action helps in managing conditions

like Agnimandya (digestive weakness) and Koshtha Shula (abdominal colic).

2. **Antitussive and Expectorant:** Components like Jatiphala, Lavanga, and Kankola possess antitussive properties, relieving cough symptoms, while also acting as expectorants, facilitating the expulsion of mucus from the respiratory tract. This makes Kumaryasava beneficial in conditions like Kasa (cough) and Shvasa (breathing difficulty).
3. **Anti-inflammatory:** The presence of herbs like Eranda and Bibhitaki confers anti-inflammatory properties to Kumaryasava, which can help alleviate inflammation associated with conditions like Arsha (piles) and Udara (abdominal distension).
4. **Antispasmodic:** Ingredients like Jatamansi and Cavya exhibit antispasmodic actions, which can help relieve spasms and cramps associated with conditions like Manyaroga (abdominal disorders) and Koshtha Shula.
5. **Hepatoprotective:** Kumaryasava contains Kumari (Aloevera), which is known for its hepatoprotective properties. This can be beneficial in managing liver disorders and promoting liver health.

PHARMACOKINETICS

1. **Absorption:** The water-based decoction of Kumari and other herbs allows for efficient absorption of active constituents in the gastrointestinal tract.
2. **Metabolism:** Once absorbed, the herbal components undergo metabolism in the liver and other tissues, where they are metabolized into active compounds.
3. **Distribution:** The active compounds are then distributed throughout the body, reaching target organs such as the digestive system, respiratory system, liver, and abdominal organs.
4. **Elimination:** Metabolites and any unutilized constituents are primarily eliminated via urine and feces.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Effect of Preparation Method on Antioxidant Activity of Ayurvedic Formulation Kumaryasava	Rahul Manmode, Depart. of Chemistry, University of Massachusetts, Lowell-01854, USA	Formulations were evaluated for antioxidant activity against DPPH and hydrogen peroxide, with WFKA showing the highest efficacy. Its IC50 values were 481.78 (DPPH) and 50.13 (hydrogen peroxide), indicating superior antioxidant potential relative to others.
2.	Effect of Preparation Method on Antioxidant Activity of Ayurvedic Formulation Kumaryasava	Rahul Manmode, Department of Chemistry, University of Massachusetts, Lowell-01854, USA	Despite slower fermentation with W. fruticosa flowers, they notably enhance Kumaryasava's antioxidant activity. Phenolic compounds in the flowers likely contribute to this effect. Thus, the traditional formulation, per Ayurvedic Pharmacopoeia, demonstrates superior antioxidant activity.
3.	Hepatoprotective Potential of Kumaryasava and Its Concentrate Against CCl_4-Induced Hepatic Toxicity in Wistar Rats	Mohammad Ahmed Khan, Department of Pharmacognosy and Phytochemistry, Bioactive Natural Product Laboratory, Faculty of Pharmacy, Hamdard University, New Delhi, India	Animals were divided into groups: control (saline), toxicant (CCl_4), and treatment (KS, KS concentrate, standard). After 10 days of oral administration, blood and liver tissue were collected. Results showed KS and its concentrate protected against CCl_4-induced hepatic toxicity, evidenced by reduced SGOT, SGPT, ALP levels, and increased albumin levels. Histopathological analysis supported these findings. KS concentrate demonstrated potential as a hepatoprotective formulation, possibly allowing a dosage reduction to one-third of the recommended dose.

5.23 Kutajarishta

Reference: AFI, Part I, page 10

तुलां कुटजमूलस्य मृद्वीकाऽर्द्धतुलां तथा।
मधूकपुष्पकाश्मर्योर्भागान् दशपलोन्मितान्।।
चतुर्द्रोणेऽम्भसः पक्त्वा द्रोणञ्चैवावशेषितम्।
धातक्या विंशतिपलं गुडस्य च तुलां क्षिपेत्।।
मासमात्रं स्थितो भाण्डे कुटजारिष्टसंज्ञितः।
ज्वरान् प्रशमयेत् सर्वान् कुर्यात्तीक्ष्णं धनञ्जयम्।।
दुर्वारां ग्रहणीं हन्ति रक्तातीसारमुल्बणम्।।

(B.R., Atisara., 7/97-99)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Kutaja	St. Bk.	4.800 kg
Draksha	Dr. Fr.	2.400 kg
Madhuka Kusuma	Fl.	480 gms
Gambhari	St. Bk.	480 gms
Water for decoction	–	49.152 L
Reduced to	–	12.288 L
Guda	–	4.800 Kg
Dhataki	Fl.	960gms

Procedure:

1. Prepare a coarse powder of all the dravyas except draksha.
2. Add water to the Kutajacoarse powders and soak the mixture overnight.
3. Take a vessel add draksha along with quantity sufficient water. Soak for 3- 4 hrs. Grind it properly and to form paste of draksha
4. The next morning, add 50 liters of water to the soaked mixture.
5. Boil the mixture and reduce it to one-fourth of its original volume and filter the kvatha (decoction).
6. Take a Sandhana Patra (fermentation vessel) and smear it with Sarshapa (mustard) oil. Pour the filtered kvatha along with pulp of drakshainto the Sandhana Patra.
7. Add melted Guda (jaggery) to the kwatha, along with all the remaining dravyas in the form of YavakutaChurna (coarse powder).
8. Close the Sandhana Patra with Sandhi-bandhana (sealing the lid) and allow the mixture to ferment properly.
9. Once it attain sandhana lakshana, then filter the final product.
10. Store it in a clean, dry, airtight container. Keep the container in a cool, dark place to preserve the potency.

Dose: 12 to 24 ml.

Indications: Jvara, Grahani, Raktatisara, Agnimandya.

PHARMACODYNAMICS

1. **Antipyretic**: Kutajarishta contains Kutaja (Holarrhena antidysenterica) and Draksha (Vitis vinifera), which possess antipyretic properties. This action helps in reducing fever (Jvara) by lowering body temperature.
2. **Anti-diarrheal**: Kutaja is well-known for its anti-diarrheal properties. It helps in managing conditions like Grahani (irritable bowel syndrome), Raktatisara (bloody diarrhea), and Atisara (acute diarrhea) by regulating bowel movements and reducing the frequency of loose stools.
3. **Digestive Stimulant**: The presence of Dhataki (Woodfordia fruticosa) in Kutajarishta acts as a digestive stimulant, improving appetite and digestion. It helps in addressing Agnimandya (digestive weakness) and promoting overall gastrointestinal health.
4. **Hematinic**: Madhuka Kusuma (Madhuca longifolia flowers) in the formulation provides hematinic properties, contributing to the restoration of hemoglobin levels in conditions associated with blood loss, such as Raktatisara.

PHARMACOKINETICS

1. **Absorption**: The water-based decoction of Kutaja and other herbs allows for efficient absorption of active constituents in the gastrointestinal tract.
2. **Metabolism**: Once absorbed, the herbal components undergo metabolism in the liver and other tissues, where they are metabolized into active compounds.
3. **Distribution**: The active compounds are then distributed throughout the body, reaching target organs such as the gastrointestinal tract and the bloodstream.
4. **Elimination**: Metabolites and any unutilized constituents are primarily eliminated via urine and feces.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	An Experimental Study of Kutajarishta (An Ayurvedic Herbal Formulation) Forits Action in Intestinal Motility	Sathyanarayana B, Principal, Muniyal Institute of Ayurveda Medical Sciences, Manipal, Karnataka, India	The study observed a delay in the onset of Kaolin expulsion and reduced intestinal motility in animal models treated with Kutajarishta. These findings suggest its effectiveness in managing conditions like diarrhea and dysentery. Kutajarishta appears promising for its potential to modulate intestinal function and warrants further investigation for therapeutic use.
2.	An Experimental Study of Kutajarishta with Special Reference to Amoebiasis	Dineshchandra, Dept. of Rasa Shastra, Institute of Medical Science, Banaras Hindu University, Varanasi-221 006, UP., India	Therefore, it can be concluded that Kutajarista reduces the peripheral levels of 5-hydroxytryptamine, thereby diminishing the virulence of E. histolytica. The three samples of Kutajarista exhibited similar effects, with no observed amoebicidal action in vivo or in vitro.
3.	Kutajarishta: An Anti-Diarrhoeal Remedy	Dr. Ajit Kumar N. Sahu, M.D. 2nd year (Kayachikitsa), R.A. Podar Medical College, Worli, Mumbai-18, Maharashtra, India.	Kutajarishta, a polyherbal Ayurvedic liquid formulation, is tailored for treating various abdominal discomforts such as diarrhea, dysentery, ulcerative colitis, sprue syndrome, IBS, and piles. With a content of 5-10% self-generated alcohol, it utilizes water as a medium to effectively absorb active herbal components into the body.

Sr.No.	Article Name	Author Name	Result
4.	Investigation of the Central, Peripheral Analgesic and Anti-inflammatory Activity of Kutajarishta, an Indian Ayurvedic Formulation	Ninadh Malrina D'Costa, Department of Pharmacy, North South University, Dhaka, Bangladesh	The study explored KTJ's anti-nociceptive and anti-inflammatory mechanisms. While it didn't affect the CNS in nociceptive tests, it showed significant results in peripheral analgesic and anti-inflammatory tests. KTJ effectively suppressed inflammatory pain but not neurogenic pain, indicating its peripheral analgesic and anti-inflammatory properties.

5.24 Gandhakadya Malahara

Reference: AFI, Part II, Page 165

सिक्थतैलं सुविमलं रसतोलकसम्मितम्।
गन्धकं गिरिसिन्दूरं तोलकार्द्धमितं पृथक्।।
टङ्कणं घनसारं च पृथक् मापद्वयोन्मितम्।
दत्त्वा सम्मेल्य यत्नेन काचकुप्यां निधापयेत्।।
मतो मलहरोऽयं तु गन्धकाद्यसमाह्वयः।
विनाशयत्याशु भृशं पामामत्यर्थदारुणाम्।। (R.T. 8/63-65)

Ingredients Used

Drug Name	Part Used	Proportion
Siktha Taila	–	72
Shuddha Gandhaka	–	6
Ghirisindura	–	6
Shuddha Tankana	–	2
Karpura	–	2

Procedure:

Collect all the ingredients of Gandhakadya Malahara. All the ingredients except Sikta Taila should be taken in a mortar and ground well. Then, Siktha Taila should be mixed in thoroughly and ground continuously for some hours. This mixture is known as Gandhakadya Malahara and should be preserved in a glass container.

Dose: External use only.

Indications: Pama.

Pharmacodynamics

1. **Antibacterial:** Gandhakadya Malahara contains Shuddha Gandhaka (purified sulfur) and Girisindura, which possess potent antibacterial properties. These components help in inhibiting the growth of bacteria responsible for skin infections, promoting wound healing, and preventing further infection.
2. **Anti-inflammatory:** The combination of ingredients in Gandhakadya Malahara exhibits anti-inflammatory effects, reducing inflammation associated with skin conditions such as Pama (scabies). This action helps in alleviating redness, swelling, and discomfort.
3. **Antipruritic:** Karpura (camphor) present in the formulation has antipruritic properties, providing relief from itching and irritation associated with skin disorders like scabies. It soothes the skin and reduces the urge to scratch, preventing further damage.
4. **Astringent:** Shuddha Tankana (borax) has astringent properties, which help in tightening the skin and promoting wound healingIt also aids in drying out the lesions and reducing oozing, thus facilitating the healing process.

Pharmacokinetics

1. **Topical Absorption:** When applied topically, the herbal oils and other active constituents in Gandhakadya Malahara are absorbed through the skin barrier.
2. **Local Action:** Upon absorption, the active ingredients exert their pharmacological effects locally on the affected area, providing relief from symptoms associated with Pama.
3. **Metabolism:** Metabolism of the absorbed compounds may occur locally in the skin tissues or systemically in the liver, depending on the nature of the ingredients.
4. **Elimination:** Any metabolites or unutilized constituents are eliminated primarily through the skin or may undergo hepatic metabolism and subsequent excretion via urine or feces.

Research Updates

Sr.No.	Article Name	Author Name	Result
1.	Effect of Gandhaka Malahara on Padadari: A Case Study	Dr. Nirmala Chandrabhanj, Lecturer (Rachana Sharir) at Bhausaheb Mulak Ayu. College, Nandanwan, Nagpur, MHA, India	Padadari, a prevalent issue characterized by painful, cracked, and dry heels, is classified as a Kshudra Roga in Ayurveda. Treatment options include internal administration of drugs, external applications, and padabhyanga (foot massage). Gandhaka Malahara, known for its healing properties, has shown promising results in alleviating Padadari symptoms.

Sr.No.	Article Name	Author Name	Result
2.	Analytical Study of Gandhakadya Malahara and its Modification with Ingudi Taila	Dr. Vekariya Jigar Tulshibha, PG Scholar, Department of PG studies in Rasashastra and Bhaishajya Kalpana, Alva's Ayurveda Medical College, Moodbidri, Karnataka, India.	Gandhakadya Malahara, prepared traditionally, was modified by substituting Ingudi taila to create Sikta taila. Both formulations showed similar physical and organoleptic characteristics. Analytical studies confirmed their genuine pharmaceutical quality, setting a preliminary standard for future research.
3.	Antimicrobial Activity of Gandhakadya Malahara in Vitro Study	Nighil Gigi, Post Graduate Scholar, Dept. of Rasa Shastra and Bhaishajya Kalpana, Ramakrishna Ayurvedic Medical College, Hospital and Research Centre, Bengaluru, Karnataka, India.	Gandhakadya Malahara, from Rasatarangini, includes five ingredients prepared traditionally. Analytical findings: P-Anisidine -8.497 mEq/kg, Peroxide -5.55 mEq/kg, Viscosity Index 1.18, pH 6.45, fatty matter 19.6. It effectively combats P. mirabilis and P. acne, addressing skin disorders like Kushta, Pama, Sidma, and Kandu.
4.	Conceptual Study of Role of Gandhakadi Malahara in Dadru	Dr. Akanksha Tripathi, MD 2nd Year, PG Department of Kayachikitsa, Rishikul Campus, UAU, Haridwar, Uttarakhand, India	Dadru, a common skin disease, lacks a complete cure due to high recurrence rates and antibiotic resistance. It's extensively mentioned in Ayurvedic texts, urging the need for effective, long-lasting treatment to prevent recurrence. Developing promising Ayurvedic remedies for Dadru or tinea infections is crucial to address this pressing issue.

5.25 Lepa Guti

Reference: AFI, Part III, page 232

CGHS Formulary, Anubhuta Yoga

Ingredients Used

Drug Name	Part Used	Proportion
Punarnava	Rt.	800 gms
Lodhara	St. Bk.	200 gms
Chitraka	Rt.	200 gms
Shunthi	Rz.	200 gms
Shuddha Guggulu	O.R.	5.0 kg
Haldi	Rz.	200 gms
Triphala Kvatha	–	9.6 L
Gomutra	–	3.0 L

Procedure:

1. Collect all the ingredients of Lepa Guti and grind them into a fine powder.
2. Place all the ingredients in a vessel, add the dravadravyas, and heat the mixture until it reaches a semi-solid consistency.
3. Shape the mixture into guti or any feasible form, and store it in an airtight container.
4. Before applying it to the body, grind it with water as the medium for application.

Dose: External Application after grinding with water.

Indications: Amavata, Shotha, Vridharoga, Gandamala, Arbuda, Yoniroga.

Pharmacodynamics

1. **Anti-inflammatory**: Lepa Guti contains ingredients like Punarnava, Lodhara, Citraka, and Haldi, which possess potent anti-inflammatory properties. These components help reduce inflammation associated with various conditions such as Amavata (rheumatoid arthritis), Shotha (swelling), and Vriddharoga (hydrocele). They alleviate pain, swelling, and discomfort.
2. **Antimicrobial**: Shunthi (ginger) present in the formulation exhibits antimicrobial effects, helping to inhibit the growth of microorganisms. This property is beneficial in treating skin infections like Gandamala (goitre) and Yoniroga (genitourinary disorders), where microbial overgrowth may contribute to the pathology.
3. **Analgesic**: The anti-inflammatory and analgesic properties of the herbs in Lepa Guti contribute to pain reliefIt can help alleviate the pain associated with conditions like Amavata and hydrocele, enhancing the overall therapeutic effect.
4. **Detoxifying**: Punarnava is known for its detoxifying properties, aiding in the elimination of toxins from the body. This action is beneficial in conditions like Amavata, where the accumulation of ama (toxins) aggravates joint inflammation and pain.

Pharmacokinetics

1. **Topical Absorption**: When applied externally as a paste (lepa) after grinding with water, the active constituents of Lepa Guti are absorbed through the skin.
2. **Local Action**: Upon absorption, the herbal compounds exert their pharmacological effects locally on the affected area, providing relief from inflammation, pain, and swelling.

3. **Metabolism**: Metabolism of the absorbed compounds may occur locally in the skin tissues or systemically in the liver, depending on the nature of the ingredients.
4. **Elimination**: Any metabolites or unutilized constituents are eliminated primarily through the skin or may undergo hepatic metabolism and subsequent excretion via urine or feces.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Pharmaceutical Development and Dosage Form Modification of Lepa Guti; An Ayurvedic Topical Formulation.	Abhay Jayprakash Gandhi, M. Pharm (Ayurved) Scholar, Department of Quality Control, IPGT & RA, Gujarat Ayurved University, Jamnagar, Gujarat, India	To enhance usability and taste, Lepa Guti was modified into gel, ointment, and cream forms. Pharmaceutical studies favored the gel for its superior spreadability and ease of preparation. All modified forms were more palatable than the original Lepa Guti, but further comparative studies are needed for confirmation.

MULTIPLE CHOICE QUESTIONS

1. **Which of the following conditions is Dashamula Kvatha primarily indicated for?**
   a. Hypertension
   b. Diabetes mellitus
   c. Parshva Shula
   d. Gastric ulcers
2. **What is the recommended dose of Dashamula Kvatha?**
   a. 24 gms
   b. 36 gms
   c. 48 gms
   d. 60 gms
3. **Which herb is NOT a part of Dashamula Kvatha?**
   a. Gokshura
   b. Pippali
   c. Shyonaka
   d. Gambhari
4. **Which pharmacodynamic property of Dashamula Kvatha makes it effective in treating cough with phlegm?**
   a. Anti-inflammatory
   b. Analgesic
   c. Expectorant
   d. Antipyretic
5. **How does Pippali Churna contribute to the pharmacokinetics of Dashamula Kvatha?**
   a. It enhances absorption and bio availability.
   b. It increases metabolism in the liver.
   c. It decreases distribution to various tissues.
   d. It facilitates excretion through the lungs.
6. **Which of the following conditions is Mahamanjishthadi Kvatha indicated for?**
   a. Digestive disorders
   b. Respiratory infections
   c. Skin diseases
   d. Cardiovascular disorders
7. **What is the primary pharmacodynamic property of Mahamanjishthadi Kvatha?**
   a. Antipyretic
   b. Antioxidant
   c. Antimicrobial
   d. Anti-inflammatory
8. **Which part of the Mahamanjishtadi Kvatha formulation contributes to its blood purifying properties?**
   a. Roots
   b. Fruits
   c. Pericarp
   d. Stem bark
9. **What role do herbs like Guduchi and Amalaki play in Mahamanjishthadi Kvatha?**
   a. Boosting the immune system
   b. Improving cognitive function
   c. Regulating blood sugar levels
   d. Stimulating appetite
10. **How does Pippali enhance the pharmacokinetics of Mahamanjishthadi Kvatha?**
    a. By enhancing liver metabolism
    b. By improving gastrointestinal absorption
    c. By accelerating urinary excretion
    d. By reducing distribution to target tissues
11. **Which of the following conditions is Pushyanuga Churna primarily indicated for?**
    a. Gout
    b. Respiratory infections
    c. Excessive menstrual bleeding
    d. Gastric ulcers
12. **What is the pharmacodynamic property of Lodhra and Patha in Pushyanuga Churna?**
    a. Anti-inflammatory
    b. Antimicrobial
    c. Hemostatic
    d. Analgesic
13. **Which part of the formulation provides astringent action in Pushyanuga Churna?**
    a. Fruit
    b. Root
    c. Seed
    d. Stem bark

14. How does Pushyanuga Churna help in treating inflammation-related disorders?
    a. By increasing bleeding
    b. By tightening tissues
    c. By reducing discharge
    d. By reducing inflammation
15. What is the recommended dosage range of Pushyanuga Churna?
    a. 5 to 10 grams
    b. 10 to 20 grams
    c. 1 to 3 grams
    d. 3 to 6 grams
16. Sudarshana Churna is primarily indicated for the treatment of:
    a. Respiratory infections
    b. Musculoskeletal disorders
    c. Digestive disorders
    d. Fever and inflammatory diseases
17. Which of the following herbs in Sudarshana Churna has hepatoprotective properties?
    a. Shunthi
    b. Nimba
    c. Katuka
    d. Daruharidra
18. What is the recommended dosage range of Sudarshana Churna?
    a. 1 to 2 grams
    b. 3 to 5 grams
    c. 5 to 8 grams
    d. 2 to 4 grams
19. Which of the following pharmacodynamic properties of Sudarshana Churna helps in reducing fever?
    a. Digestive stimulation
    b. Antioxidant
    c. Antipyretic
    d. Antimicrobial
20. How does Sudarshana Churna aid in the management of digestive disorders?
    a. By reducing inflammation
    b. By stimulating digestion
    c. By protecting the liver
    d. By neutralizing free radicals
21. Lavana Bhaskara Churna is primarily indicated for the treatment of:
    a. Respiratory infections
    b. Cardiovascular disorders
    c. Digestive disorders
    d. Skin diseases
22. Which of the following ingredients in Lavana Bhaskara Churna supports liver function and protects against liver disorders?
    a. Dhanyaka
    b. Maricha
    c. Pippali
    d. Shunthi
23. What is the recommended dose of Lavana Bhaskara Churna?
    a. 1 to 2 grams
    b. 3 to 5 grams
    c. 5 to 8 grams
    d. 2 to 4 grams
24. Which property of Lavana Bhaskara Churna helps in relieving gas and abdominal spasms?
    a. Antioxidant
    b. Antimicrobial
    c. Carminative and antispasmodic
    d. Digestive stimulation
25. How does Lavana Bhaskara Churna aid in promoting bowel movements?
    a. By reducing inflammation
    b. By stimulating digestion
    c. By exerting laxative effects
    d. By supporting liver function
26. Bilvadi Gutika is primarily indicated for the treatment of:
    a. Respiratory infections
    b. Skin diseases
    c. Digestive disorders
    d. Cardiovascular disorders
27. Which property of Bilvadi Gutika helps in relieving gas and abdominal spasms?
    a. Antimicrobial
    b. Immunomodulatory
    c. Carminative and antispasmodic
    d. Antitoxic
28. What is the role of Bilva and Tulasi in Bilvadi Gutika?
    a. Enhancing digestive function
    b. Neutralizing toxins and venoms
    c. Reducing fever
    d. Modulating the immune response
29. How does Bilvadi Gutika aid in promoting bowel movements?
    a. By reducing inflammation
    b. By enhancing immune function
    c. By exerting antipyretic effects
    d. By stimulating digestive function
30. What role does Haridra play in Bilvadi Gutika?
    a. Enhancing liver function
    b. Relieving gas and spasms
    c. Possessing antimicrobial and anti-inflammatory properties
    d. Modulating the immune response
31. Chitrakadi Gutika is primarily indicated for the treatment of :
    a. Respiratory infections

b. Skin diseases
c. Digestive disorders
d. Cardiovascular disorders

32. Which ingredient in Chitrakadi Gutika acts as a laxative and antacid?
a. Pippali
b. Hingu
c. Yava kshara
d. Shunthi

33. How does Chitrakadi Gutika aid in enhancing appetite?
a. By reducing inflammation
b. By stimulating digestive fire
c. By balancing electrolytes
d. By preventing the formation of gas

34. What role do salts (Lavana) play in Chitrakadi Gutika?
a. Enhancing liver function
b. Balancing electrolytes
c. Stimulating appetite
d. Preventing gas formation

35. Which part of the body is primarily targeted by Chitrakadi Gutika's pharmacokinetics?
a. Respiratory system
b. Skin
c. Gastrointestinal system
d. Cardiovascular system

36. What is the primary indication for Sanjivani Vati?
a. Skin diseases
b. Respiratory infections
c. Fever and associated symptoms
d. Cardiovascular disorders

37. Which ingredient in Sanjivani Vati possesses antipyretic properties?
a. Vidanga
b. Guduchi
c. Shunthi
d. Vatsanabha

38. How does Guduchi contribute to the pharmacodynamics of Sanjivani Vati?
a. By reducing inflammation
b. By enhancing immunity
c. By improving digestion
d. By acting as an antipyretic

39. What role do Haritaki, Amalaki, and Bibhitaki play in Sanjivani Vati?
a. Enhancing liver function
b. Boosting immunity
c. Supporting digestion
d. Acting as antipyretics

40. How are the active ingredients in Sanjivani Vati primarily excreted from the body?
a. Through the skin
b. Through the respiratory system
c. Via urine and feces
d. Through the kidneys

41. What is the primary indication for Vyoshadi Vati?
a. Skin diseases
b. Gastrointestinal disorders
c. Respiratory conditions
d. Cardiovascular diseases

42. Which ingredient in Vyoshadi Vati acts as an expectorant?
a. Shunthi
b. Maricha
c. Chavya
d. Jiraka

43. What is the role of Tintidika in Vyoshadi Vati?
a. Anti-inflammatory
b. Antitussive
c. Expectorant
d. Bronchodilatory

44. How does Vyoshadi Vati exert its anti-inflammatory effects?
a. Through the action of Shunthi
b. Through the action of Maricha
c. Through the action of Chitraka and Jiraka
d. Through the action of Pippali

45. How are the active constituents in Vyoshadi Vati primarily excreted from the body?
a. Through the skin
b. Through the respiratory system
c. Via urine and feces
d. Through the kidneys

46. What is the primary indication for Bala Chaturbhadra Rasa?
a. Cardiovascular diseases
b. Gastrointestinal disorders
c. Respiratory conditions
d. Musculoskeletal disorders

47. Which ingredient in Bala Chaturbhadra Rasa exhibits antipyretic properties?
a. Musta
b. Pippali
c. Ativisha
d. Karkata Shringi

48. What is the traditional use of Karkata Shringi in Bala Chaturbhadra Rasa?
a. To reduce inflammation
b. To treat diarrhea
c. To alleviate fever
d. To support respiratory health

49. How are the active constituents in Bala Chaturbhadra Rasa primarily excreted from the body?
a. Through the skin
b. Through the respiratory system

c. Via urine and feces
d. Through the kidneys

50. Which of the following is NOT a pharmacodynamic property of Simhanada Guggulu?
a. Balancing Tridoshas
b. Antimicrobial
c. Anti-inflammatory
d. Antioxidant

51. What is the primary function of Simhanada Guggulu in the body's immune system?
a. Suppressing immune responses
b. Boosting overall immunity
c. Inhibiting allergic reactions
d. Reducing inflammation

52. How does Simhanada Guggulu aid in digestion?
a. By reducing appetite
b. By promoting nutrient absorption
c. By slowing down gastrointestinal motility
d. By causing bloating and indigestion

53. Which doshas does Yogaraja Guggulu primarily act upon for restoring balance?
a. Vata and Pitta
b. Pitta and Kapha
c. Vata and Kapha
d. Vata and Rakta

54. What is one of the pharmacodynamic properties of Yogaraja Guggulu?
a. Antiemetic
b. Antipyretic
c. Antihistaminic
d. Anti-inflammatory

55. How does Yogaraja Guggulu aid in digestion?
a. By reducing appetite
b. By slowing down gastrointestinal motility
c. By inhibiting the digestive fire (Agni)
d. By stimulating the digestive fire (Agni)

56. What is one of the primary indications for Dadimavaleha?
a. Asthma
b. Diabetes
c. Fever and diarrhea
d. Hypertension

57. Which property of Dadimavaleha helps in reducing inflammation in the gastrointestinal tract?
a. Antipyretic
b. Anti-diarrheal
c. Anti-inflammatory
d. Digestive stimulant

58. How is Dadimavaleha administered?
a. Intravenously
b. Sublingually
c. Orally
d. Topically

59. Which of the following conditions is NOT listed as an indication for Panchagavya Ghrita?
a. Epilepsy (Apasmara)
b. Jaundice (Kamala)
c. Diabetes (Prameha)
d. Fever (Jvara)

60. How does Panchagavya Ghrita exert its sedative effects?
a. By increasing neuronal activity
b. By inhibiting liver function
c. By calming the central nervous system
d. By stimulating the adrenal glands

61. What is the primary route of excretion for metabolites and unmetabolized compounds of Panchagavya Ghrita?
a. Urine
b. Feces
c. Sweat
d. Saliva

62. Which of the following conditions is NOT listed as an indication for Brahmi Ghrita?
a. Epilepsy (Apasmara)
b. Skin disorders (Kushtha)
c. Speech disorders (Vakshvara Bhanga)
d. Osteoporosis

63. How does Brahmi Ghrita primarily exert its nootropic effects?
a. By reducing neurotransmitter levels
b. By promoting inflammation in the brain
c. By enhancing cognitive functions like memory and concentration
d. By inducing neuronal excitability

64. What is the suggested anupana (vehicle) for administering Brahmi Ghrita?
a. Warm milk, warm water
b. Cold water
c. Fresh fruit juice
d. Herbal tea

65. Which of the following properties is NOT associated with Narayana Taila?
a. Anti-inflammatory
b. Antipyretic
c. Analgesic
d. Muscle relaxant

66. What is the suggested dose of Narayana Taila for internal use?
a. 3 gms
b. 6 gms
c. 9 gms
d. 12 gms

67. Which of the following herbs is NOT included in the composition of Narayana Taila?
a. Punarnava
b. Tulsi
c. Jatamansi
d. Ashvagandha

68. Which of the following herbs is NOT included in the composition of Neelibhringadi Taila?
a. Bhringaraja
b. Amalaki
c. Tulsi
d. Shatakratulata

69. What is the primary indication for the external use of Nilibhringadi Taila?
a. Digestive disorders

b. Hair growth disorders
c. Skin infections
d. Respiratory conditions

70. Which component of Nilibhringadi Taila helps in scalp nourishment and hydration?
a. Gunja Mula
b. Yasthi
c. Narikela Kshira
d. Daruharidra

71. What is the primary indication for the external use of Panchaguna Taila?
a. Digestive disorders
b. Joint pain and inflammation
c. Respiratory conditions
d. Skin infections

72. Which of the following ingredients in Panchaguna Taila is known for its anti-inflammatory properties?
a. Haritaki
b. Amalaki
c. Nirgundi Patra
d. Bibhitaki

73. How does the formulation of Panchaguna Taila facilitate skin penetration?
a. Through the presence of water for decoction
b. Through the use of essential oils like Tila Taila
c. Through the inclusion of Madhuchchhishta and Sarala
d. Through the addition of Karpura and Rala

74. What is the primary indication for the use of Aravindasava?
a. Respiratory infections
b. Skin disorders
c. Digestive impairment
d. Cardiovascular diseases

75. Which of the following herbs in Aravindasava contribute to its immunomodulatory effects?
a. Haritaki, Bibhitaki, Amalaki
b. Manjishtha, Jatamansi, Shveta Sariva
c. Arjuna, Patola
d. Kamala, Ushira, Gambhari

76. How does Aravindasava promote overall well-being?
a. By reducing inflammation and oxidative stress
b. By enhancing the body's defense mechanisms
c. By nourishing the body tissues and improving vitality
d. By stimulating digestion and assimilation of nutrients

77. What is the primary indication for the use of Ashokarishta?
a. Skin disorders
b. Respiratory infections
c. Painful menstruation
d. Musculoskeletal injuries

78. Which of the following herbs in Ashokarishta contribute to its antipyretic properties?
a. Daruharidra
b. Shunthi
c. Ashoka
d. Bibhitaki

79. How does Ashokarishta promote uterine health?
a. By reducing inflammation in the uterus
b. By acting as a digestive stimulant
c. By regulating menstrual flow and acting as a uterine tonic
d. By exerting hemostatic effects

80. Which of the following conditions is NOT listed as an indication for using Kumaryasava?
a. Abdominal distension (Udara)
b. Joint disorders (Manyaroga)
c. Loss of appetite (Agnimandya)
d. Headache (Shirahshula)

81. What is the primary action of Haritaki in Kumaryasava?
a. Antitussive
b. Digestive stimulant
c. Antispasmodic
d. Anti-inflammatory

82. Which herb in Kumaryasava contributes to its hepatoprotective properties?
a. Jatiphala
b. Chavya
c. Eranda
d. Kumari (Aloevera)

83. Which of the following conditions is NOT listed as an indication for using Kutajarishta?
a. Fever (Jvara)
b. Irritable bowel syndrome (Grahani)
c. Headache (Shirahshula)
d. Bloody diarrhea (Raktatisara)

84. What is the primary action of Kutajarishta in managing gastrointestinal disorders?
a. Antipyretic
b. Digestive stimulant
c. Anti-inflammatory
d. Antispasmodic

85. Which herb in Kutajarishta provides hematinic properties?
a. Kutaja
b. Draksha
c. Madhuka Kusuma
d. Gambhari

86. Which of the following is NOT an indication for using Gandhakadya Malahara?
a. Scabies (Pama)
b. Acne (Yauvana Pidika)
c. Eczema (Vicharchika)
d. Psoriasis (Sidhma)

87. What is the primary pharmacodynamic action of Karpura (camphor) in Gandhakadya Malahara?
a. Antibacterial
b. Antifungal
c. Antipruritic
d. Astringent

88. **How does Shuddha Tankana (Borax) contribute to the pharmacodynamics of Gandhakadya Malahara?**
    a. By promoting wound healing
    b. By inhibiting bacterial growth
    c. By reducing inflammation
    d. By tightening the skin

89. **Which of the following conditions is NOT an indication for using Lepa Guti?**
    a. Amavata (Rheumatoid arthritis)
    b. Asthma (Shvasa)
    c. Hydrocele (Vriddharoga)
    d. Skin infections (Gandamala)

90. **What is the primary pharmacodynamic action of Punarnava in Lepa Guti?**
    a. Antimicrobial
    b. Analgesic
    c. Anti-inflammatory
    d. Detoxifying

91. **How does Shunthi (Ginger) contribute to the pharmacodynamics of Lepa Guti?**
    a. By reducing inflammation
    b. By providing analgesic effects
    c. By exhibiting antimicrobial effects
    d. By aiding in detoxification

Answers Keys

1.	c	2.	c	3.	b	4.	c	5.	a
6.	c	7.	d	8.	d	9.	a	10.	b
11.	c	12.	c	13.	a	14.	d	15.	c
16.	d	17.	c	18.	d	19.	c	20.	b
21.	c	22.	c	23.	b	24.	c	25.	c
26.	c	27.	c	28.	b	29.	d	30.	c
31.	c	32.	c	33.	b	34.	b	35.	c
36.	c	37.	c	38.	b	39.	c	40.	c
41.	c	42.	c	43.	b	44.	c	45.	c
46.	c	47.	a	48.	d	49.	c	50.	b
51.	b	52.	b	53.	c	54.	d	55.	d
56.	c	57.	c	58.	c	59.	c	60.	c
61.	b	62.	d	63.	c	64.	a	65.	b
66.	b	67.	b	68.	c	69.	b	70.	c
71.	b	72.	c	73.	b	74.	c	75.	b
76.	c	77.	c	78.	c	79.	c	80.	d
81.	b	82.	d	83.	c	84.	b	85.	c
86.	b	87.	c	88.	d	89.	b	90.	d
91.	c								

Short Answer Questions (SAQ)

- Short note on Panchagavya Ghrita.
- Ingridents of Pushyanuga Churna.
- Probable Mode of Action of Bala Chaturabhadra Rasa.
- Mahamanjishthadi Kvatha.

Long Answer Questions (SAQ)

- Describe Avaleha Kalpana and write in detail Dadima Avaleha.
- Describle impotance of Sandhana Kalpana and write Kumaryaasava.
- Write the ingridents, Matra, probable mode of action of Chitrakaadhi Gutika and its research updates.

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CHAPTER 6

DOSAGE FORMS & COSMETIC PRODUCTS

6.1 Introduction of Different Dosage Form

A drug is a substance designed for use in the diagnosis, mitigation, treatment, cure, or prevention of diseases in humans or animals. However, drugs are seldom given in their pure form. Instead, they are administered in various dosage forms, which are created by combining the drug with other substances known as "additives." These additives serve multiple purposes:

1. **Formulation Shape:** Additives help to create a specific shape for the drug, making it easier to handle, administer, and consume. For instance, tablets, capsules, and syrups all have distinct shapes and consistencies that facilitate their use.
2. **Stability Enhancement:** Many drugs can degrade over time due to factors such as light, heat, and moisture. Additives can enhance the stability of the drug, protecting it from degradation and thereby extending its shelf life.
3. **Palatability Improvement:** Drugs often have a bitter or unpleasant taste. Additives can mask these tastes, making the medication more palatable and increasing the likelihood of patient compliance, especially in children.
4. **Aesthetic Appeal:** The appearance of a drug can influence patient perception and compliance. Additives can improve the color, texture, and overall appearance of the medication, making it more attractive and acceptable to users.
5. **In summary,** the incorporation of additives into drug formulations is essential for creating effective, stable, and user-friendly medications. These additives ensure that the drug is not only therapeutically effective but also easy and pleasant to use.

6.2 Importance of Dosage Forms

Transforming a drug into various dosage forms is crucial for several reasons:

1. **Accurate and Safe Dosage Delivery**: Dosage forms ensure that the patient receives the correct amount of the drug in a safe and convenient manner. This helps to prevent under-dosing or overdosing, which can lead to ineffective treatment or adverse effects, respectively.
2. **Easy Identification**: Many dosage forms can be easily recognized by their distinct color, shape, or identifying markings. This helps in avoiding medication errors and ensures that patients and healthcare providers can easily distinguish between different medications.
3. **Protection from Environmental Factors**: Some drugs are susceptible to degradation due to oxidation, hydrolysis, or reduction. Dosage forms like coated tablets and sealed ampoules protect the drug from these environmental factors, thus maintaining the drug's efficacy and shelf life.
4. **Protection from Gastric Juices:** Certain drugs can be destroyed or inactivated by the acidic environment in the stomach. Enteric-coated tablets are designed to resist the acidic gastric juices and dissolve only in the more neutral environment of the intestines, ensuring the drug reaches its site of action intact.
5. **Taste and Odor Masking**: Many drugs have a bitter, salty, or otherwise unpleasant taste or odor. Dosage forms such as capsules, coated tablets, and flavored syrups mask these undesirable characteristics, making the medication more palatable and improving patient compliance, especially among children.
6. **Insertion into Body Cavities**: Some drugs are administered through body cavities for local or systemic effects. Dosage forms like rectal or vaginal suppositories are designed for this purpose, ensuring that the drug is delivered directly to the site of action or absorbed through the mucous membranes.

7. **Inhalation Therapy**: For drugs intended to act on the respiratory system or to provide rapid systemic effects, inhalation therapy is often used. Dosage forms such as inhalation aerosols and inhalants allow the drug to be delivered directly to the lungs, providing quick onset of action and targeted delivery.
8. **Maximum Drug Action from Topical Administration Sites**: Dosage forms like creams, ointments, ophthalmic preparations, and ENT (Ear, Nose, and Throat) preparations are designed for application directly to the skin or mucous membranes. This method ensures that the drug acts directly at the site of application, providing targeted therapeutic effects and minimizing systemic side effects.
9. **Sustained Release Action through Controlled Release Mechanisms**: Sustained release tablets, capsules, and suspensions are formulated to release the drug gradually over an extended period. This helps maintain a consistent drug concentration in the bloodstream, enhancing therapeutic effectiveness and reducing the need for frequent dosing.
10. **Liquid Dosage Forms for Drugs Soluble in Suitable Vehicles**: Solutions are liquid dosage forms where the drug is fully dissolved in a solvent. This form ensures uniform distribution of the drug and is ideal for patients who have difficulty swallowing solid dosage forms or require rapid drug absorption.
11. **Liquid Preparations for Drugs Insoluble or Unstable in Different Vehicles**: Suspensions are liquid formulations where the drug particles are dispersed in a liquid medium but not dissolved. This type of dosage form is used for drugs that are insoluble or unstable in solvents, ensuring that the drug remains effective while providing an alternative to solid dosage forms.

In summary, the transformation of drugs into various dosage forms is essential for ensuring accurate dosing, easy identification, and protection from environmental and bodily factors, improved palatability, and effective delivery through different routes of administration. These considerations enhance the overall effectiveness and acceptability of the medication.

6.3 Principles of Dosage Form Design

These principles provide guidelines for developing pharmaceutical formulations that effectively, safely, and conveniently deliver drugs to patients:

1. **Biopharmaceutics and Pharmacokinetics**: Understanding the drug's solubility, permeability, and stability, as well as its absorption, distribution, metabolism, and excretion, helps determine the appropriate route of administration, dosage regimen, and release kinetics.
2. **Patient-Centered Approach**: Formulations should be user-friendly, pleasant-tasting (if applicable), and tailored to meet the needs of different patient populations (e.g., children, elderly) to enhance compliance and treatment outcomes.
3. **Route of Administration**: Selecting the suitable route (oral, parenteral, topical, inhalation) based on the drug's properties and desired therapeutic effect is crucial.
4. **Release Kinetics**: Controlling drug release profiles (immediate-release, sustained-release, targeted release) is essential for achieving optimal pharmacokinetic behavior and therapeutic effects.
5. **Excipient Selection and Compatibility**: Excipients must aid in drug delivery, improve stability, and provide desirable formulation characteristics while being compatible with the drug and other excipients to ensure a stable, effective formulation.
6. **Manufacturing and Quality Control**: Robust manufacturing processes and strict quality control measures ensure consistency, reproducibility, and regulatory compliance.
7. **Safety and Tolerability**: Prioritizing patient safety by minimizing adverse effects and toxicity, considering the excipients' safety profile, and the route of administration.
8. **Stability and Shelf-Life**: Proper formulation and packaging are necessary to maintain drug stability throughout its shelf life, considering factors like temperature, humidity, and light sensitivity.
9. **Cost-Effectiveness**: Designing cost-effective dosage forms ensures affordable and accessible medications without compromising quality and efficacy.
10. **Emerging Technologies and Personalized Medicine**: Innovations such as nanotechnology, 3D printing, and personalized medicine based on patient characteristics and genetic profiles are shaping the future of pharmaceutical formulations.

6.4 Primary Reasons for Designing a Dosage Form

1. PROTECTION

- *Environmental Protection:* Shield medications from air, oxygen, temperature, and humidity (e.g., coated tablets, capsules, ampoules).
- *Gastric Protection:* Prevent acid-labile medications from degrading in the stomach due to gastric acid (e.g., enteric-coated tablets).

- *Chemical Stability:* Ensure the stability of drugs by preventing chemical interactions.
- *Microbial Contamination:* Design dosage forms to prevent contamination, maintaining drug safety and efficacy.
- *Mechanical Protection:* Make dosage forms (e.g., tablets with protective coatings) resilient to physical stress during handling and transportation.
- *Inhalation Protection:* Ensure metered-dose inhalers and dry powder inhalers protect the medication during administration.
- *Parenteral Protection:* Maintain sterility and avoid contamination in parenteral dosage forms (e.g., ampoules, vials).

2. Improve Therapeutic Activity

- *Targeted Action:* Deliver the drug to the intended site (e.g., transdermal patches, ointments).
- *Direct Insertion:* Administer medications into body orifices (e.g., rectal, vaginal suppositories).
- *Optimal Drug Action:* Achieve the best drug action in tissues or the bloodstream (e.g., injections, inhalants).
- *Prolonged Release:* Provide controlled release administration for sustained therapeutic effects.
- *Increased Bioavailability:* Enhance the absorption of medications with a narrow absorption window (e.g., gastro retentive formulations).

3. Patient Compliance

- *Unit Dose:* Ensure dose accuracy (e.g., tablets, capsules).
- *Reduced Dosage Frequency:* Lower the frequency of dosing (e.g., prolonged release, sustained release).
- *Masking Taste/Odor:* Improve the palatability of medicines (e.g., film-coated tablets, capsules, suspensions).
- *Easy Administration:* Facilitate administration and handling (e.g., chewable tablets, liquid forms for children).

By adhering to these principles, pharmaceutical dosage forms are designed to meet patient needs, optimize drug delivery, and improve therapeutic outcomes, ensuring patient well-being and treatment efficacy.

6.5 Classification of Dosage Forms

Dosage forms can be classified based on the physical form of the final product. The main categories are:

1. Solid Dosage Forms

Solid dosage forms are those in which the drug is in a solid state. These forms are highly stable, convenient for storage and transportation, and allow for precise dosing. Common solid dosage forms include:

- **Tablets**
  - **Compressed Tablets:** Simple tablets formed by compressing the drug and additives.
  - **Coated Tablets:** Tablets covered with a coating to protect the drug, mask taste, or control release.
  - **Effervescent Tablets:** Contain ingredients that release gas when in contact with water, aiding in drug dissolution.
  - **Chewable Tablets:** Designed to be chewed before swallowing, often flavored to improve palatability.
  - **Sublingual Tablets:** Placed under the tongue for rapid absorption into the bloodstream.
  - **Buccal Tablets:** Placed between the gum and cheek for absorption through the mucous membranes.
- **Capsules**
  - **Hard Gelatin Capsules:** Contain dry, powdered ingredients or mini-pellets enclosed in a hard gelatin shell.
  - **Soft Gelatin Capsules:** Contain liquid or semi-solid drugs enclosed in a soft, flexible gelatin shell.
- **Powders and Granules**
  - **Bulk Powders:** Drugs in a powdered form intended to be measured and mixed with liquid before administration.
  - **Granules:** Larger, agglomerated particles often used in sachets or as an intermediate for tablet production.
- **Lozenges and Pastilles**
  - **Lozenges:** Solid preparations that dissolve slowly in the mouth, delivering the drug locally or systemically.
  - **Pastilles:** Soft, chewable, or gummy solid dosage forms, often used for throat medications.
- **Others**
  - **Pills:** An older form of solid dosage, typically spherical.
  - **Troches:** Compressed or molded discs that dissolve slowly in the mouth.
  - **Implants:** Small, sterile, solid forms placed under the skin for long-term drug release.

2. Liquid Dosage Forms

Liquid dosage forms consist of a drug dissolved or suspended in a suitable liquid medium. These forms are particularly useful for patients who have difficulty swallowing solids and can provide rapid drug absorption. Common liquid dosage forms include:

❖ **Solutions**

- **Oral Solutions**: Drugs dissolved in a suitable solvent for oral administration.
- **Syrups**: Concentrated aqueous preparations of sugar or sugar substitute containing the drug.
- **Elixirs**: Clear, sweetened, hydroalcoholic solutions for oral use.
- **Tinctures**: Alcoholic or hydroalcoholic solutions prepared from plant or chemical substances.
- **Drops**: Highly concentrated solutions administered in small volumes, often using a dropper.

❖ **Suspensions**

- **Oral Suspensions**: Finely divided drug particles suspended in a liquid medium for oral administration.
- **Topical Suspensions**: Suspensions applied to the skin for local action.

❖ **Emulsions**

- **Oral Emulsions**: Mixtures of two immiscible liquids, one dispersed in the other, for oral administration.
- **Topical Emulsions**: Emulsions applied to the skin, often used in creams and lotions.

❖ **Injections**

- **Intravenous (IV)**: Direct injection into a vein.
- **Intramuscular (IM)**: Injection into a muscle.
- **Subcutaneous (SC)**: Injection under the skin.
- **Intradermal (ID)**: Injection into the dermis layer of the skin.

❖ **Other Liquid Forms**

- **Inhalations**: Solutions or suspensions administered through inhalation.
- **Enemas**: Solutions or suspensions introduced into the rectum.
- **Gargles and Mouthwashes**: Solutions intended for rinsing the mouth or throat.

3. Semi-Solid Dosage Forms

Semi-solid dosage forms are intended for topical application to the skin or mucous membranes. They combine the properties of both solid and liquid dosage forms, providing localized or systemic drug action. Common semi-solid dosage forms include:

❖ **Ointments**

- **Hydrocarbon Base**: Greasy, occlusive preparations used for moisturizing.
- **Absorption Bases**: Allow incorporation of aqueous solutions to form w/o emulsions.
- **Water-Removable Bases**: Non-greasy, easy-to-remove bases forming o/w emulsions.
- **Water-Soluble Bases**: Non-greasy bases that are completely water-soluble.

❖ **Creams**

- **Oil-in-Water (O/W) Creams**: Non-greasy creams used for hydrating the skin.
- **Water-in-Oil (W/O) Creams**: Greasier creams providing an emollient effect.

❖ **Gels**

- **Hydrogels**: Contain water and provide a cooling effect.
- **Organogels**: Contain an organic liquid phase.

❖ **Pastes**

Stiffer than ointments: Contain a higher proportion of solid material, providing a protective layer.

❖ **Others**

- **Suppositories**: Solid dosage forms designed to melt at body temperature, administered rectally or vaginally.
- **Pessaries**: Similar to suppositories but specifically for vaginal administration.
- **Plasters**: Semi-solid preparations applied to a backing material for prolonged contact with the skin.

In summary, the classification of dosage forms into solid, liquid, and semi-solid categories helps in understanding their distinct characteristics, applications, and advantages in drug delivery.

6.6 Cosmetic Products

The word "cosmetic" is derived from the Greek word "kosmetikos," which means to adorn. In ancient days, any material used for beautification or improvement of appearance was known as a cosmetic.

A cosmetic, as per the Drugs and Cosmetics Act and Rules, 1945, refers to any substance meant for cleansing, protecting, beautifying, enhancing attractiveness, or changing the appearance of the human body or any part thereof, whether applied by rubbing, pouring, sprinkling, spraying, or any other means. Soap is excluded from this definition because it is considered more of a bodily necessity than a cosmetic. Similarly, preparations such as room deodorants are not cosmetics, but if the same deodorant is applied to the body, it is termed a cosmetic. Articles or devices used in applying cosmetics, such as combs, brushes, razor blades, etc., should not be included in cosmetics. Generally, cosmetics are safe for use by almost all people, but

adverse reactions may occur in certain individuals when using many cosmetics, such as deodorants, hair shampoos, hair sprays, hair removers, hair dyes, facial creams, skin cleansers, lipsticks, and nail polishes.

Cosmetics serve one of the following functions:

- Maintain body health and hygiene.
- Avoid premature aging of the skin.
- Provide a sense of well-being.
- Improve overall looks and personality.
  - The raw materials used in the manufacture of cosmetics should be of standard quality and should be tested before use. Only distilled or purified water should be used in the preparation of cosmetics. The dyes used to give color to cosmetics should be approved for FD&C to avoid allergic reactions. The perfumes used should be compatible with other ingredients in the cosmetic preparation.

CLASSIFICATION

This classification helps in understanding the diverse range of cosmetic products available and their intended use, function, and physical characteristics. Additionally, it aids in regulatory compliance and ensures appropriate marketing and labeling of cosmetic products.

Cosmetics are classified into three main categories:

1. **According to their use**
   - **Skin Care**: Includes creams, powders, lotions, deodorants, and antiperspirants.
   - **Nail Care**: Such as nail polish, polish removers, and manicure preparations.
   - **Oral Care**: Includes dentifrices and mouthwashes.
   - **Eye Care**: Includes eye creams, lash products, and liners.
   - **Hair Care**: Including shampoos, dyes, tonics, and sprays.
2. **According to their functions:**
   - **Curative or Therapeutic**: Products with medicinal properties like antiperspirants and certain hair preparations.
   - **Protective**: Such as face powders.
   - **Corrective**: Including certain face powders.
   - **Decorative**: Like lipsticks, nail polishes, and mascaras.
3. **According to their physical nature:**
   - **Aerosols**: Such as hair perfumes and after-shave lotions.
   - **Cakes**: Including rouge and makeup compacts.
   - **Emulsions**: Such as vanishing cream, cold cream, and cleansing cream.
   - **Oils**: Such as hair oils.
   - **Pastes**: Like toothpaste and deodorant paste.
   - **Powders**: Including face powder and talcum powder.
   - **Solutions**: Such as after-shave lotions and hand lotions.
   - **Soaps**: Including shaving soap, toilet soap, and shampoo soap.
   - **Sticks**: Like lipsticks and deodorant sticks.

6.7 Advantages and Disadvantages of Currently Available Dosage Forms

Each dosage form has its own set of advantages and disadvantages, making it suitable for specific medical conditions, patient needs, and drug properties. The choice of dosage form is crucial for optimizing therapeutic outcomes, patient compliance, and overall treatment effectiveness.

1. ORAL DOSAGE FORMS

TABLETS AND CAPSULES

- **Advantages**
  - Convenient and easy to administer.
  - Accurate dosing.
  - Long shelf life.
  - Generally stable and easy to manufacture.
- **Disadvantages**
  - Not recommended for individuals with swallowing challenges.
  - Delayed onset of action compared to injectable forms.
  - Possible gastrointestinal irritation.
  - Variable absorption due to first-pass metabolism.

Liquids SOLUTIONS, SUSPENSIONS, SYRUPS

- **Advantages**
  - Easier to swallow for children and elderly patients.
  - Faster absorption and onset of action compared to solid forms.
  - Flexible dosing.
- **Disadvantages**
  - Less stable than solid forms.
  - Shorter shelf life.
  - Potential for dose inaccuracy.
  - Often require preservatives.

2. Topical Dosage Forms

Creams, Ointments, Gels

❖ **Advantages**
- Direct application to the site of action.
- Reduced systemic side effects.
- Suitable for patients who cannot take oral medications.

❖ **Disadvantages**
- Messy and inconvenient to apply.
- Limited to local effects.
- Possible skin irritation or allergic reactions.

Transdermal Patches

❖ **Advantages**
- Sustained and controlled release of medication.
- Avoids first-pass metabolism.
- Convenient and improves patient compliance.

❖ **Disadvantages**
- Skin irritation or allergic reactions.
- Limited to drugs that are effective at low doses.
- Slow onset of action.

3. Parenteral Dosage Forms

Injectables (Intravenous, Intramuscular, Subcutaneous)

❖ **Advantages**
- Rapid onset of action.
- Suitable for drugs that are poorly absorbed orally.
- Precise control over drug levels in the bloodstream.

❖ **Disadvantages**
- Invasive and may induce discomfort or pain.
- Requires sterile techniques and trained personnel.
- Higher risk of infection.
- More expensive to manufacture and administer.

4. Inhalation Dosage Forms

Aerosols, Dry Powder Inhalers, Nebulizers

❖ **Advantages**
- Quick absorption via the respiratory tract.
- Direct delivery to the lungs, useful for respiratory conditions.
- Reduced systemic side effects.

❖ **Disadvantages:**
- Technique-dependent, requiring proper usage for effectiveness.
- Irritation of the respiratory tract.
- Limited to drugs suitable for inhalation.

5. Rectal and Vaginal Dosage Forms

Suppositories, Creams, Gels

❖ **Advantages**
- Useful for patients who cannot take oral medications.
- Bypasses first-pass metabolism.
- Local and systemic effects.

❖ **Disadvantages**
- Inconvenient and discomforting for certain patients.
- Variable absorption.
- Limited patient acceptance.

6. Sublingual and Buccal Dosage Forms

Tablets, Films, Sprays

❖ **Advantages**
- Rapid onset of action.
- Bypasses first-pass metabolism.
- Convenient and easy to administer.

❖ **Disadvantages:**
- Limited to drugs that are effective at low doses.
- Potential for irritation of the oral mucosa.
- Unpleasant taste for some formulations.

6.8 Modification of Classical Ayurvedic Dosage

Adaptations and alterations are essential for the advancement of any field of science, enabling it to ascend to new levels of achievement. Ayurveda has multiple effective basic formulations for treating various diseases and disorders, but challenges such as limited shelf life and poor palatability pose significant hurdles to the administration of these drugs. Suitable dosage forms are required to protect the drug from the adverse effects of atmospheric changes and gastric acid during oral administration, to mask the bitter taste and foul odor, and to provide extended drug action through controlled release mechanisms. To use these formulations effectively in the present era, they require modifications into new dosage forms that enhance shelf life and palatability, suiting patients' needs without compromising the underlying basic principles.

Key Areas for Modification

Primary preparations are mainly modified for

1. **Increasing Palatability:** Making the formulations more pleasant to taste.
2. **Extending Shelf Life:** Enhancing the stability and longevity of the formulations.

3. **Achieving Global Acceptance**: Ensuring the formulations meet international standards.
4. **Ease of Administration**: Making the dosage forms simpler and more convenient to use.
5. **Dose Fixation**: Ensuring accurate and consistent dosing.

Benefits of Modifications

Modifying traditional Ayurvedic formulations into new dosage forms helps achieve public acceptance by:

1. Enhancing the appearance and form of the drugs.
2. Improving palatability.
3. Increasing shelf life.
4. Enhancing therapeutic utility or potency.
5. Simplifying dispensing.
6. Improving portability

Techniques and Additives for Modification

The following agents can be added to achieve effective modifications:

1. **Suitable Vehicles**: Used to dissolve or suspend drugs, mask bad taste, and potentiate the drug. These are used in Bhavana (impregnation), cooking drugs, and Anupana (vehicle for drug administration).
2. **Harmless Coloring Agents**: Make the drugs more visually acceptable.
3. **Sweetening Agents**: Such as sugarcane, used in syrups to make them palatable, particularly for conditions like Paittika Vikara (disorders related to Pitta dosha), and suitable for pediatric use.
4. **Flavoring Agents**: Mask undesirable tastes, textures, smells, and appearances. The addition of ingredients like Trijata (a combination of three aromatic substances) and Chaturjata (a combination of four aromatic substances) enhances the taste and smell.

By incorporating these modifications, traditional Ayurvedic formulations can be adapted to meet modern needs and preferences, thereby increasing their efficacy, acceptability, and therapeutic value.

6.9 Route of Drug Administration

The route of drug administration refers to the method by which medications are introduced into the body to achieve therapeutic effects. There are various routes, including oral (by mouth), topical (applied to the skin), injection (directly into the body), inhalation (via the respiratory system), rectal, sublingual/buccal (under the tongue or between the cheek and gum), transdermal (through the skin), and intranasal (via the nose). Each route has its advantages and disadvantages, impacting factors such as the onset of action, bioavailability, patient compliance, and ease of administration. The selection of the appropriate route depends on factors such as the drug's properties, the patient's condition, desired therapeutic outcomes, and patient preference. Understanding the different routes of drug administration is crucial for healthcare professionals to ensure safe and effective medication delivery.

Different Routes of Drug Administration:

1. Oral Route: This is the most common route, where drugs are ingested through the mouth and absorbed through the gastrointestinal tract. It includes tablets, capsules, liquids, and powders. Advantages include ease of administration and patient compliance. However, absorption can be variable due to factors like stomach acidity, food interactions, and first-pass metabolism in the liver.

❖ **Advantages**

- **Convenience**: Administering oral medications is straightforward and does not necessitate specialized training.
- **Patient Compliance**: Many patients find it easier to take medications orally, leading to better adherence to treatment regimens.
- **Absorption**: Some drugs are well absorbed through the gastrointestinal tract, leading to predictable and consistent blood levels.
- **Versatility**: Various dosage forms are available for oral administration, including tablets, capsules, liquids, and powders, accommodating different patient needs.

❖ **Disadvantages**

- **Variable Absorption**: Absorption of oral medications can be affected by factors like food, pH of the stomach, and gastrointestinal motility, leading to variable blood levels.
- **First-pass Metabolism**: Drugs absorbed orally may undergo extensive metabolism in the liver before reaching systemic circulation, reducing their bioavailability.
- **Irritation**: Some medications can irritate the gastrointestinal tract, causing symptoms like nausea, vomiting, or gastric irritation.
- **Inconvenience for Certain Patients**: Patients with swallowing difficulties, nausea, or vomiting may find it challenging to take medications orally.
- **Slow Onset of Action**: Oral medications may have a slower onset of action compared to other routes, such as injection or inhalation, which provide more rapid effects.

2. Topical Route: Medications are applied directly to the skin or mucous membranes for local effects. This includes creams, ointments, gels, and patches. It's effective for skin conditions, pain relief, and localized treatments. Absorption rates vary depending on skin thickness, hydration, and blood flow to the area.

❖ **Advantages**

- **Localized Effect:** Topical medications are applied directly to the affected area, providing targeted therapy and minimizing systemic exposure.
- **Reduced Systemic Side Effects:** By bypassing the digestive system and avoiding first-pass metabolism in the liver, topical medications can reduce systemic side effects.
- **Convenient Application:** Topical medications are often easy to apply and can be self-administered by patients, increasing convenience and adherence to treatment regimens.
- **Controlled Dosing:** Topical formulations allow for precise dosing, enabling healthcare providers to adjust medication amounts according to individual patient needs.
- **Potential for Extended Release:** Certain topical formulations, such as patches, can provide sustained drug release over an extended period, reducing the frequency of application.

❖ **Disadvantages:**

- **Variable Absorption:** Absorption of topical medications can be inconsistent and influenced by factors such as skin integrity, hydration, and the presence of occlusive dressings.
- **Limited Penetration:** Some medications may have difficulty penetrating the skin barrier, limiting their effectiveness in treating deeper tissues or systemic conditions.
- **Skin Irritation:** Topical medications may cause skin irritation, allergic reactions, or sensitization in some individuals, leading to discomfort or adverse effects.
- **Potential for Contamination:** Improper application or handling of topical medications can increase the risk of contamination, infection, or unintended exposure to others.
- **Limited Use for Systemic Conditions:** While effective for localized conditions, the topical route may not be suitable for treating systemic diseases or conditions requiring widespread drug distribution throughout the body.

3. Injection Route: Drugs are introduced into the body via injection. This route offers rapid onset of action and precise dosing. It includes subcutaneous (under the skin), intramuscular (into muscle), and intravenous (into a vein) injections. Intravenous injections provide immediate effects, while subcutaneous and intramuscular injections offer sustained release.

❖ **Advantages**

- **Rapid Onset of Action:** Injections provide a faster onset of action compared to oral medications, making them ideal for emergency situations or when immediate therapeutic effects are needed.
- **Precise Dosage:** Injections allow for precise dosing, ensuring accurate delivery of medication into the body.
- **Bypassing First-Pass Metabolism:** Injected drugs bypass the digestive system and liver metabolism, leading to higher bioavailability compared to oral administration.
- **Predictable Blood Levels:** Injection route often results in consistent and predictable blood levels of medications, optimizing therapeutic outcomes.
- **Suitable for Non-Oral Administration:** Injections are useful for patients who are unable to take medications orally due to factors such as nausea, vomiting, or impaired gastrointestinal function.

❖ **Disadvantages**

- **Invasive Procedure:** Injections require piercing the skin with a needle, which can be uncomfortable or painful for patients and may cause anxiety.
- **Risk of Infection:** Injection site infections can occur, especially if proper aseptic techniques are not followed during administration.
- **Tissue Damage:** Improper injection technique or repeated injections at the same site can lead to tissue damage, scarring, or localized reactions.
- **Specialized Training Required:** Administration of injections requires proper training and skills to ensure safety and effectiveness.
- **Potential for Adverse Reactions:** Some patients may experience adverse reactions, such as allergic reactions or injection site pain, swelling, or redness.

4. Inhalation Route: Medications are administered through inhalation into the respiratory system. This route is used for conditions like asthma, COPD, and respiratory infections. It allows for rapid absorption into the bloodstream via the lungs. Inhalers, nebulizers, and vaporizers are common delivery devices.

❖ **Advantages**

- **Rapid Onset of Action:** Inhalation allows medications to be absorbed directly into the

bloodstream through the lungs, resulting in rapid onset of action.

- **Targeted Delivery**: Inhalation delivers medications directly to the respiratory system, providing targeted therapy for conditions such as asthma, COPD, and respiratory infections.
- **Lower Systemic Side Effects**: By delivering medications directly to the lungs, the inhalation route can minimize systemic side effects compared to oral or injection routes.
- **Reduced Dosage Requirement**: Inhalation typically requires lower doses of medication compared to oral or injection routes, as drugs are delivered directly to the site of action.
- **Patient Preference**: Many patients prefer inhalation therapy over other routes due to its ease of use and the perception of immediate relief for respiratory symptoms.

❖ **Disadvantages**

- **Technique Dependency**: Proper inhalation technique is essential for effective drug delivery, and some patients may struggle with using inhalation devices correctly.
- **Device Complexity**: Inhalation devices can be complex to use, requiring proper assembly, maintenance, and coordination between inhalation and medication release.
- **Limited Application**: Inhalation therapy is primarily suitable for respiratory conditions and may not be suitable for medications targeting other areas of the body.
- **Irritation**: Some medications delivered via inhalation may cause irritation to the respiratory tract, leading to coughing, throat irritation, or bronchospasm in sensitive individuals.
- **Cost**: Inhalation devices and medications can be more expensive compared to oral medications, potentially limiting access for some patients.

5. Rectal Route: Drugs are inserted into the rectum for absorption into the bloodstream. This route is used when oral administration is not feasible, such as in patients who are vomiting or unconscious. It can also provide local effects for conditions like hemorrhoids or nausea.

❖ **Advantages**

- **Avoids First-Pass Metabolism**: Drugs administered rectally bypass the liver and enter the systemic circulation directly via the rectal veins, avoiding first-pass metabolism and potentially enhancing bioavailability.
- **Rapid Absorption**: The rectal mucosa has a rich blood supply, allowing for relatively rapid absorption of medications into the bloodstream.
- **Useful in Nausea/Vomiting**: The rectal route can be used when oral administration is not feasible due to nausea, vomiting, or impaired consciousness, ensuring medication delivery in such cases.
- **Localized Therapy**: Rectal medications can provide localized therapy for conditions such as hemorrhoids, anal fissures, or inflammatory bowel disease.
- **Pediatric and Geriatric Use**: The rectal route is often preferred in pediatric and geriatric populations, as it can be easier and more acceptable than oral or injection routes for some patients.

❖ **Disadvantages**

- **Lack of Patient Acceptance**: Rectal administration may be perceived as uncomfortable or invasive by some patients, leading to reluctance or non-compliance with treatment.
- **Variable Absorption**: Absorption of rectally administered drugs can be variable and unpredictable due to factors such as rectal pH, fecal matter, and rectal mucosal integrity.
- **Risk of Irritation**: Some medications or excipients used in rectal formulations may irritate the rectal mucosa, leading to discomfort, bleeding, or local irritation.
- **Limited Drug Selection**: Not all medications are available in rectal formulations, limiting the options for rectal administration.
- **Inconvenience**: Rectal administration may be considered inconvenient compared to other routes, requiring proper positioning and insertion of suppositories or enemas.

6. Sublingual/Buccal Route: Medications are placed under the tongue (sublingual) or between the cheek and gum (buccal). This route allows for rapid absorption into the bloodstream without passing through the digestive system or first-pass metabolism in the liver. It's commonly used for drugs like nitroglycerin and some opioids.

❖ **Advantages**

- **Rapid Absorption**: Drugs administered via the sublingual or buccal route are absorbed directly into the bloodstream through the mucous membranes, leading to rapid onset of action.
- **Bypasses First-Pass Metabolism**: Sublingual and buccal medications bypass the liver and gastrointestinal tract, avoiding first-pass metabolism and potentially enhancing bioavailability.

- **Convenient Administration**: Sublingual and buccal medications are easy to administer and do not require swallowing, making them suitable for patients with difficulty swallowing or nausea.
- **Patient Compliance**: Many patients prefer sublingual and buccal medications due to their ease of use, convenience, and avoidance of needles or swallowing pills.
- **Precise Dosing**: Sublingual and buccal formulations allow for precise dosing, as medications are directly absorbed into the bloodstream without the need for gastrointestinal absorption.

❖ **Disadvantages**

- **Limited Drug Compatibility**: Not all drugs are suitable for sublingual or buccal administration, as they may require specific formulations or characteristics to be effectively absorbed through the mucous membranes.
- **Taste and Sensation**: Some medications administered sublingually or buccally may have an unpleasant taste or cause irritation or discomfort in the mouth, leading to patient dissatisfaction or non-compliance.
- **Saliva Interference**: Saliva production and composition can affect drug absorption via the sublingual and buccal routes, potentially altering drug effectiveness or bioavailability.
- **Limited Drug Stability**: Sublingual and buccal formulations may have limited stability, requiring careful storage and handling to maintain drug efficacy and integrity.
- **Inconvenience for Prolonged Use**: Sublingual and buccal administration may be inconvenient for medications that require frequent or prolonged dosing, as repeated administration may lead to mucosal irritation or discomfort.

7. Transdermal Route: Medications are delivered through the skin via patches or creams. The drug is absorbed into the bloodstream through the skin for systemic effects. This route provides continuous, controlled release over an extended period.

❖ **Advantages**

- **Controlled and Sustained Release**: Transdermal patches deliver medication through the skin in a controlled and sustained manner, providing continuous drug release over an extended period (usually hours to days).
- **Avoids First-Pass Metabolism**: Transdermal delivery bypasses the liver and gastrointestinal tract, avoiding first-pass metabolism and potentially enhancing drug bioavailability.
- **Reduced Systemic Side Effects**: Transdermal administration can minimize systemic side effects by delivering medication directly into the bloodstream while avoiding the digestive system.
- **Convenient and Non-Invasive**: Transdermal patches are easy to apply and remove, offering a non-invasive and convenient option for medication administration.
- **Improved Patient Compliance**: Transdermal patches provide a simple and user-friendly method of medication delivery, potentially improving patient compliance compared to oral medications or injections.

❖ **Disadvantages**

- **Limited Drug Absorption**: Not all drugs are suitable for transdermal delivery, as their molecular size, lipophilicity, and other factors can affect skin permeability and absorption.
- **Skin Irritation**: Some individuals may experience skin irritation, allergic reactions, or sensitization at the application site, leading to discomfort or adverse effects.
- **Slow Onset of Action**: Transdermal patches may have a slower onset of action compared to other routes of drug administration, as the medication must first penetrate the skin barrier before entering the bloodstream.
- **Size and Thickness Constraints**: Transdermal patches are restricted by the size and thickness of molecules that can be effectively delivered through the skin, limiting the range of drugs suitable for this route.
- **Potential for Adhesion Issues**: Transdermal patches may not adhere well to all skin types or may become displaced during activities such as bathing or exercise, affecting drug delivery and efficacy.

8. Intranasal Route: Medications are administered through the nose for rapid absorption into the bloodstream. It's used for drugs like nasal sprays or drops for conditions like allergies, congestion, or migraines.

❖ **Advantages:**

- **Rapid Absorption**: Intranasal medications are absorbed directly through the nasal mucosa into the bloodstream, resulting in rapid onset of action.
- **Non-Invasive**: Intranasal administration does not require needles or invasive procedures, making it well-tolerated and suitable for patients who may be averse to injections.

- **Convenient Administration**: Intranasal medications are easy to administer and do not require swallowing, making them suitable for patients with difficulty swallowing or nausea.
- **Avoids First-Pass Metabolism**: Intranasal drugs bypass the liver and gastrointestinal tract, avoiding first-pass metabolism and potentially enhancing bioavailability.
- **Targeted Delivery to the Brain**: Intranasal administration can provide targeted delivery of drugs to the central nervous system, bypassing the blood-brain barrier and achieving therapeutic concentrations in the brain.

❖ **Disadvantages:**

- **Nasal Irritation**: Some individuals may experience nasal irritation, dryness, or discomfort with intranasal medications, leading to nasal congestion or nose bleeds.
- **Variable Absorption**: Absorption of intranasal medications can be variable and affected by factors such as nasal mucosal integrity, mucociliary clearance, and individual differences in nasal anatomy.
- **Limited Volume Capacity**: The nasal cavity has limited volume capacity, restricting the amount of medication that can be administered intranasally in a single dose.
- **Nasal Administration Devices**: Intranasal medications require specialized administration devices such as nasal sprays, droppers, or atomizers, which may be unfamiliar or challenging for some patients to use correctly.
- **Potential for Nasal Deposition**: Some intranasal medications may deposit in the anterior or posterior nasal passages, leading to reduced drug absorption or systemic side effects.

Each route of administration has its advantages, disadvantages, and specific considerations based on factors such as drug properties, patient characteristics, and desired therapeutic outcomes.

6.10 Research Updates

❖ In the article titled "Recent Trends in Traditional Medicine Dosage Forms and Present Status of Unani and Ayurvedic Medicine" by Hamiduddin, a lecturer in the Department of Ilmul Saidla at the National Institute of Unani Medicine, Bangalore, Karnataka, India, published in the International Journal of Pharmaceutical Sciences and Research, various innovations that can be adopted in Ayurvedic medicine are discussed. These innovations include the development of granules, tablets, capsules, suspensions, syrups, linctus, emulsions, liposomes, hair dyes, toothpaste, face packs, dentifrices, hand wash, gel, sprays, shampoo, eye drops, suppositories, ointments, liniments, and face powder.

❖ In the study titled "Modification of Drug Dosage Form of Arjuna Kshirapaka by Using Spray Drying Technology" by Swapnil Talmale, published in the Journal of Research in Traditional Medicine in 2017, Arjuna Kshirapaka was prepared following guidelines from Acharya Yadavaji Trikamji's contemporary reference textbook. The preparation involved using a Labultima spray dryer unit set at standard thermoregulatory settings to create a spray-dried powder. This method aims to modernize traditional Ayurvedic formulations by enhancing their stability, shelf life, and ease of use while preserving their therapeutic properties.

❖ In the study titled "Comparative GC-MS Analysis of Gomutra Sadhita Triphala Kvatha and Gomutra Sadhita Triphala Arka" by Neerja Thakur, a PG Scholar in the Department of Rasa Shastra and Bhaishajya Kalpana at Parul Institute of Ayurved, Parul University, Vadodara, Gujarat, published in the Journal of Survey in Fisheries Sciences, it is revealed that Gomutra Sadhita Triphala Kvatha and Gomutra Sadhita Triphala Arka dosage forms contain entirely different components. Arka is rich in volatile compounds with anti-inflammatory properties, whereas Kvatha contains components that inhibit protein denaturation, thereby also acting as an anti-inflammatory agent.

❖ A review by Virali J. Parmar from Sardar Patel College of Pharmacy, Bakrol Anand, Gujarat, India, published in the Journal of Pharmacognosy and Phytochemistry, focuses on the preparation and evaluation of a herbal nasal spray. The study aims to evaluate Tulsi distillate prepared through various methods for use in a nasal spray. The intranasal delivery system utilizes Tulsi distillate in an aqueous solution. The formulation includes Tulsi distillate, saline, sodium benzoate, eucalyptus oil, glycerine, and purified water. Distilling 250 g of Tulsi produced approximately 0.2 ml of slightly water-soluble and viscous distillate. The study assessed various parameters, including sterility, visual appearance, and stability.

❖ In "Formulation and Evaluation of Herbal Transdermal Patches," Jyothsna Savula from the Department of Pharmacognosy at Marri Laxman Reddy Institute of Pharmacy, Dundigal, Hyderabad, Telangana,

India, prepared various matrix-type patches with different polymer combinations using Nelumbo nucifera flowers. Phytochemical tests showed the presence of alkaloids, glycosides, and amino acids in the methanolic extracts. The herbal transdermal patches exhibited good folding endurance, moisture uptake, and drug content uniformity. Over 24 hours, formulation F6, with a higher HPMC to PVA ratio, demonstrated the best drug release and permeation.

MULTIPLE CHOICE QUESTIONS

1. **Which of the following is NOT a purpose served by additives in drug formulations?**
   a. Formulation Shape
   b. Stability Enhancement
   c. Taste and Odor Masking
   d. Increasing the drug's potency
2. **What is the primary function of enteric-coated tablets?**
   a. Enhancing the drug's color
   b. Protecting the drug from degradation by gastric juices
   c. Increasing the palatability of the drug
   d. Expediting the drug's absorption in the stomach
3. **Which dosage form is ideal for drugs that are insoluble or unstable in solvents?**
   a. Capsules
   b. Suspensions
   c. Tablets
   d. Solutions
4. **What is the purpose of sustained-release dosage forms?**
   a. To release the drug rapidly into the bloodstream
   b. To maintain a consistent drug concentration in the bloodstream over an extended period
   c. To decrease the shelf life of the drug
   d. To mask the unpleasant taste of the drug
5. **Which route of administration is associated with dosage forms like rectal or vaginal suppositories?**
   a. Oral
   b. Inhalation
   c. Topical
   d. Parenteral
6. **Which principle emphasizes understanding a drug's solubility, permeability, and pharmacokinetic behavior to determine the appropriate dosage regimen and release kinetics?**
   a. Patient-Centered Approach
   b. Route of Administration
   c. Release Kinetics
   d. Biopharmaceutics and Pharmacokinetics
7. **What is a primary reason for designing dosage forms to protect medications from microbial contamination?**
   a. Chemical Stability
   b. Environmental Protection
   c. Improve Therapeutic Activity
   d. Patient Compliance
8. **Which dosage form is designed to provide controlled release administration for sustained therapeutic effects?**
   a. Tablets
   b. Capsules
   c. Injections
   d. Prolonged-release formulations
9. **What is the main objective of designing dosage forms with improved palatability, such as film-coated tablets or flavored suspensions?**
   a. Environmental Protection
   b. Targeted Action
   c. Patient Compliance
   d. Optimal Drug Action
10. **Which principle focuses on selecting the most suitable route of drug administration based on the drug's properties and therapeutic effect desired?**
    a. Stability and Shelf-Life
    b. Excipient Selection and Compatibility
    c. Safety and Tolerability
    d. Route of Administration
11. **Which of the following is NOT a type of solid dosage form?**
    a. Tablets
    b. Solutions
    c. Capsules
    d. Powders
12. **What type of tablets are placed under the tongue for rapid absorption into the bloodstream?**
    a. Chewable Tablets
    b. Effervescent Tablets
    c. Sublingual Tablets
    d. Buccal Tablets
13. **Which liquid dosage form consists of finely divided drug particles suspended in a liquid medium?**
    a. Solutions
    b. Elixirs
    c. Syrups
    d. Suspensions

    Ans: d
14. **Which semi-solid dosage form is specifically designed for rectal or vaginal administration and melts at body temperature?**
    a. Ointments
    b. Creams
    c. Suppositories
    d. Gels

15. **What is the purpose of using troches as a dosage form?**
    a. To shield medications from environmental factors
    b. To provide controlled release administration
    c. To facilitate administration and handling
    d. To dissolve slowly in the mouth for localized or systemic drug action

16. **According to the classification based on their use, which category of cosmetics includes products like creams, powders, lotions, deodorants, and antiperspirants?**
    a. Nail Care
    b. Eye Care
    c. Skin Care
    d. Oral Care

17. **Which classification of cosmetics includes products with medicinal properties like antiperspirants and certain hair preparations?**
    a. Curative or Therapeutic
    b. Protective
    c. Corrective
    d. Decorative

18. **Among the physical nature classification of cosmetics, which category includes products such as vanishing cream, cold cream, and cleansing cream?**
    a. Oils
    b. Emulsions
    c. Pastes
    d. Powders

19. **Which type of cosmetic products are typically included in the aerosols category?**
    a. Nail polishes
    b. Face powders
    c. Hair perfumes
    d. Toothpaste

20. **What physical nature category of cosmetics includes products like lipsticks and deodorant sticks?**
    a. Sticks
    b. Soaps
    c. Solutions
    d. Cakes

21. **Which of the following is an advantage of oral tablets and capsules as dosage forms?**
    a. Rapid onset of action
    b. Reduced risk of gastrointestinal irritation
    c. Long shelf life
    d. Suitable for patients with swallowing challenges

22. **What is a disadvantage of topical creams, ointments, and gels?**
    a. Quick absorption and onset of action
    b. Limited to local effects
    c. Reduced systemic side effects
    d. Convenient and easy to apply

23. **Which advantage does the transdermal patch offer as a dosage form?**
    a. Rapid onset of action
    b. Direct delivery to the lungs
    c. Avoids first-pass metabolism
    d. Suitable for drugs that are poorly absorbed orally

24. **What is a disadvantage of parenteral injectables?**
    a. Limited to drugs that are suitable for inhalation
    b. Quick absorption via the respiratory tract
    c. Precise control over drug levels in the blood-stream
    d. Higher risk of infection

25. **Which disadvantage is associated with inhalation dosage forms?**
    a. Quick absorption via the respiratory tract
    b. Reduced systemic side effects
    c. Limited to drugs that are suitable for inhalation
    d. Bypasses first-pass metabolism

26. **What is an advantage of the oral route of drug administration?**
    a. Rapid onset of action
    b. Avoids first-pass metabolism
    c. Targeted delivery to the lungs
    d. Suitable for patients with swallowing difficulties

27. **Which route of drug administration provides controlled and sustained release over an extended period?**
    a. Topical route
    b. Inhalation route
    c. Rectal route
    d. Transdermal route

28. **What is a disadvantage of the intranasal route of drug administration?**
    a. Rapid absorption
    b. Non-invasive administration
    c. Nasal irritation
    d. Avoids first-pass metabolism

29. **Which advantage does the transdermal route offer over oral administration?**
    a. Variable absorption
    b. Slow onset of action
    c. Reduced systemic side effects
    d. Limited drug selection

30. **What is a disadvantage of the injection route of drug administration?**
    a. Precise dosage
    b. Bypassing first-pass metabolism
    c. Non-invasive procedure
    d. Risk of infection

Answers Keys

1.	d	2.	b	3.	b	4.	b	5.	c
6.	d	7.	b	8.	c	9.	d	10.	d
11.	b	12.	c	13.	d	14.	c	15.	d
16.	c	17.	a	18.	b	19.	c	20.	a
21.	c	22.	b	23.	c	24.	d	25.	c
26.	d	27.	d	28.	c	29.	c	30.	d

Short Answer Questions (SAQ)

- Explain Different Dosage form and write its advantages and disadvantages.
- Write Cosmetic products and its classification.
- Write Short Note on Route of drug administration
- Write the ingredients of Phala Ghrita and its Research Updates.
- Research updates on modification of Ayurvedic dosage form.

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CHAPTER 7

NUTRACEUTICALS

A nutraceutical is a product derived from food sources that provides additional health benefits beyond the basic nutritional value found in foods. These products can include dietary supplements, fortified foods, functional foods, and medical foods. The term "nutraceutical" is a blend of the words "nutrition" and "pharmaceutical," and it refers to any product that combines nutritional and medicinal benefits. Nutraceuticals are similar to the Ayurvedic principles of Aahara Kalpana, as they have proven benefits in managing chronic illnesses. For instance, consider the medicated food Moong-dal-rice (Khichadi) made with Trikatu powder. It is often given to patients with fever as a nutritional supplement and to stimulate the digestive system when they have Agni Mandya. Nutraceuticals can be connected to the Ayurvedic concepts of Hita, Ahita, Satmya, Asatmya, and Pathyapathya. Condiments like Ela, Maricha, Dhanyaka, and Haridra, as well as Harit Varga Dravya like Rasona and Ardraka, are used wisely. These ingredients enhance food digestion, add micronutrients, and hasten nutritional absorption. Specific preparation techniques, the length of cooking time, the use of medicinal water, banana leaves, particular tools, etc., all boost the nutritional value. Nutraceuticals significantly impact the development of treatments in the current self-medication environment. As people age, their nutritional requirements may increase or decrease depending on their age. Numerous studies have shown that nutraceuticals made from fruit or plant extracts reduce oxidative stress and promote healthy aging in invertebrate models.

Advantages of Nutraceuticals:

1. Agreeable to the palate or taste.
2. Effectiveness.
3. Targeted bioavailability.
4. More nutrition in a smaller amount.
5. Increased safety. The development of Ayurveda will benefit from a greater emphasis on the applications of nutraceuticals.

7.1 Kushmanda Avaleha

Reference: AFI, Part I

कूष्माण्डकात्पलशतं सुस्विन्नं निष्कुलीकृतम्।
पचेत्तप्ते घृतप्रस्थे शनैस्ताम्रमये दृढे।।
यदा मधुनिभः पाकस्तदा खण्डशतं न्यसेत्।
पिप्पलीशृङ्गवेराभ्यां द्वे पले जीरकस्य च।।
त्वगेलापत्रमरिचधान्यकानां पलार्द्धकम्।
न्यसेच्चूर्णीकृतं तत्तु दर्व्या सङ्घट्टयेत्पुनः।।
तत्पक्वं स्थापयेद् भाण्डे दत्त्वा क्षौद्रं घृतार्द्धकम्।
तद्यथाग्निबलं खादेदुक्तपित्ती क्षतक्षयी।।
कासश्वासतमश्छर्दितृष्णाज्वरनिपीडितः।
वृष्यं पुनर्नवकरं बलवर्णप्रसादनम्।।
उरःसन्धानकरणं बृंहणं स्वरशोधनम्।
अश्विभ्यां निर्मितं श्रेष्ठं कूष्माण्डकरसायनम्।।
खण्डामलकमानानुसारात् कूष्माण्डकद्रवात्।
पात्रं पाकाय दातव्यं यावान्वात्र रसो भवेत्।।

(B.R., Raktapitta., 13/95-101)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Kushamanda	Fr.	4.800 kg
Ghrita	–	768 gms
Khanda	–	4.800 kg
Pippali	Fr.	96 gms
Shunthi	Rz.	96 gms
Shveta Jiraka	Fr.	96 gms
Tvak	St. Bk.	24 gms
Ela	Sd.	24 gms
Patra	Lf.	24 gms
Maricha	Fr.	24 gms
Dhanya	Fr.	24 gms
Madhu	–	384 gms

Procedure:

1. Take pieces of kushmanda (ash gourd) and boil them in water until the volume is reduced by half.
2. Remove the well-cooked pieces of kushmanda and make a paste by piercing them multiple times.
3. Fry the kalka with ghee in a copper vessel.
4. Add sugar to the decoction and cook the mixture until it reaches a two thread consistency.
5. Once the paka lakshana attains, add fine powder of praksepadravyas.
6. Allow the content to cool down and then add honey (madhu).
7. Store in air tight container.

Dose: 6-12 gms.

Anupana: Water, Milk.

Therapeutic Indications: Kasa, Shvasa, Urahkshata, Kshaya, Puranajvara, Raktapitta, Chardi, Trishna, Jvara, Shukra Kshaya, Daurbalya, Karshya, Svarabedha, Vaivarnya.

PHARMACODYNAMICS

1. **Kushmanda (Ash Gourd)**: Rich in antioxidants and nutrients, Kushmanda helps in boosting immunity and promoting overall health. It possesses anti-inflammatory properties, which may aid in reducing inflammation associated with various conditions like cough (Kasa), dyspnoea (Shvasa), and bleeding disorders (Raktapitta).
2. **Pippali (Long Pepper) and Shunthi (Dry Ginger)**: These ingredients possess warming properties and are known for their digestive stimulant effects. They may help in improving digestion and relieving symptoms like cough, dyspnoea, and indigestion.
3. **Shveta Jiraka (Cumin)**: Cumin seeds are carminative and may help in relieving flatulence and abdominal discomfort. They also possess antimicrobial properties.
4. **Tvak (Cinnamon), Ela (Cardamom), Patra (Cinnamomum Tamala), and Maricha (Black Pepper)**: These spices are known for their digestive and carminative properties. They may aid in digestion, reduce flatulence, and enhance the bioavailability of nutrients.
5. **Madhu (Honey)**: Honey is a natural sweetener with antimicrobial properties. It may help in soothing the throat and relieving cough symptoms.

PHARMACOKINETICS

1. **Absorption**: The active constituents of Kushmanda Avaleha, including various herbs and spices, are absorbed in the gastrointestinal tract.
2. **Distribution**: Once absorbed, the bioactive compounds are distributed to various tissues, exerting their therapeutic effects throughout the body.
3. **Metabolism**: The metabolism of the ingredients occurs primarily in the liver, where they undergo biotransformation into metabolites.
4. **Excretion**: Metabolites and unutilized components are excreted mainly through urine and feces, while some may be eliminated through sweat and other bodily secretions.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Exploring potential of Kushmanda Avaleha in respiratory illness – A comprehensive review	Sheetal Sharma, Department of Rasashastra and Bhaishajya Kalpana, All India Institute of Ayurveda, Sarita Vihar, New Delhi - 110 076, India. E-mail: ssheetal904@ gmail.com	Based on a synthesis of literature from both traditional texts and scientific journals, Kushmanda Avaleha, a polyherbal formulation, demonstrates varied quantities of its constituents and exhibits pharmacological properties with therapeutic efficacy, particularly in addressing respiratory ailments. It serves as a comprehensive treatment option for respiratory disorders.
2.	Evaluation of Nutritive Value of Kushmanda Avaleha	Adhave Swati Sheshrao, PG Scholar, Depart. of RSBK, Government Ayurved College Nanded, Maharashtra, India.	Kushmanda Avaleha comprises 4.44% fats, 1.05% proteins, and 82.10% carbohydrates. Additionally, it contains 60 mg/100 gm of sodium and 11 mg/100 gm of zinc, providing 372 Kcals/100 gm of energy to the body.
3.	Nutraceutical Value of Kushmanda Avaleha and its Importance for Children's Health and Growth: A Review Article	Mukta Bariha, Department of Kaumarabhritya, Shri Narayan Prasad Awasthi, Government Ayurved College, Raipur, Chhattisgarh, India.	Kushmanda Avaleha, for all ages, fights weakness post-illness, acting as a tonic and Amlapitta remedy by reducing Pitta. Bhavamishra notes its memory-enhancing properties. With nutrients aiding weight gain, nourishment, and immunity, it's endorsed for overall nourishment, strength, and weight gain by Acharyas, offering holistic benefits.

Sr.No.	Article Name	Author Name	Result
4.	An Clinical Study on Khanda Kushmanda Avleha and Narikela Avaleha in the Management of Amlapitta	Dr. Pradeep Gupta, PG Scholar, Dept. of Kayachikitsa, Major S.D. Singh P.G. Ayurvedic Medical College & Hospital, Bewar Road, Farrukhabad, U.P.	Statistical analysis favored Kushmanda Khanda over Narikela Khanda. Both had positive effects, with no adverse reactions, highlighting Ayurveda's safety. Emphasizing healthy habits and prevention, including diet, exercise, and mindfulness practices, is crucial for a healthier life.
5.	Pharmaceutical Modification of Kushmandavaleha into Candy	Dr Akshatha, Ashwini Ayurvedic Medical College & PG Centre Davangere, Karnataka	Due to its high water content, Kushmanda experienced a 90% loss during fruit pulp collection. Water-soluble extractives outweighed alcohol-soluble ones. Microbial load remained within acceptable limits. The avaleha was mixed with sugar syrup and molded into candies of various shapes, with a pleasant taste observed.
6.	Pharmaceutico Analytical Profile of Kushmanda Avaleha and Its Modified Dosage Form as Kushmanda Granules	Dr. Neha Sudarshann Chavhan, Deparment of Rasashastra and Bhaishajya Kalpana, Mahatma Gandhi Ayurveda College Hospital and Research Centre, Wardha - 442001, Maharashtra, India	The study reports Avaleha's parameters: Loss on drying at 105°C, total ash, acid-insoluble ash, alcohol-soluble extractives, water-soluble extractives, pH, total sugar, reducing sugar, nonreducing sugar, and total fat and moisture content in the range of 2.3%, 0.7%, 0.103%, 71.22%, 77.12%, 4.2%, 78.15%, 68.21%, 5.6%, and 2.92%, respectively. For granules, the range is 3.1%, 1.2%, 0.36%, 38.09%, 41.2%, 3.53, 80.17, 78.12, 4.5, 0.92, and 3.12, respectively.

7.2 Preenana Modaka

Reference: Ashtanga Hridaya Uttarasthana

प्रियाळमज्जमधुकमधुलाजसितोपलैः।
अपस्तन्यस्य संयोज्यः प्रीणनो मोदकः शिशोः॥
दीपनो बालबिल्वैलाशर्करालाजसक्तुभिः।
सङ्ग्राही घातकीपुष्पशर्करालाजतर्पणैः॥ (A.H.U. 1/38)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Priyala	Enm.	1 Part
Yashtimadhu	Rt.	1 Part
Lajja	(Parched Rice)	1 Part
Sharkara	–	1 Part
Madhu	–	1 Part

Procedure:

1. Gather all the required dried ingredients for Preenana Modaka. Ensure each ingredient is clean and free from impurities.
2. Using a Khalva Yantra or a grinder, grind first four ingredients separately into a fine powder.
3. Then add all the fine powdered drugs with adding madhu.
4. Stir well until suitable for tablets form (Modaka shape).
5. Dry properly and store in a sterilized, airtight container.

Dose: 12 gms.

Therapeutic Indications: Pacify Vata- Pitta, Malnourised Children.

PHARMACODYNAMICS

1. **Priyal (Indian Costus):** Priyal is known for its digestive stimulant properties. It helps in improving digestion and relieving gastrointestinal discomfort. Additionally, it possesses carminative and anti-inflammatory properties, which may aid in pacifying Vata and Pitta doshas.
2. **Yashtimadhu (Licorice):** Yastimadhu is a well-known herb in Ayurveda with various pharmacological properties. It acts as a demulcent and expectorant, soothing the respiratory tract and promoting the expulsion of mucus. It also has anti-inflammatory and immunomodulatory effects, contributing to its therapeutic benefits.
3. **Lajja (Parched Rice):** Parched rice serves as a source of carbohydrates and energy. It is easily digestible and may provide quick nourishment to malnourished children.
4. **Sharkara (Sugar):** Sugar acts as a sweetening agent in Preenana Modaka. It provides sweetness and enhances palatability, making it more acceptable, especially for children.
5. **Madhu (Honey):** Honey serves as a binding agent and adds sweetness to the preparation. It also possesses antimicrobial properties and may contribute to the overall therapeutic effect of the formulation.

PHARMACOKINETICS

1. **Absorption:** The active constituents of Preenana Modaka are absorbed in the gastrointestinal tract, where they are broken down into smaller molecules for absorption into the bloodstream.

2. **Distribution**: Once absorbed, the components are distributed throughout the body, providing nourishment and exerting their therapeutic effects.
3. **Metabolism**: The metabolism of the ingredients occurs primarily in the liver, where they may undergo biotransformation into metabolites.
4. **Excretion**: Metabolites and unutilized components are excreted mainly through urine and feces.

NOTE : Preenana Modaka is a nutritive and digestive formulation designed to pacify Vata and Pitta doshas while providing nourishment to malnourished children. The combination of Priyala, Yashtimadhu, Lajja, Sharkara, and Madhu synergistically works to improve digestion, boost immunity, and address nutritional deficiencies in children.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Study of Nutritional Values of Preenan Modak and Prinan Modaka Biscuits	Sheela Pargunde HOD & Professor, Rasa Shastra and Bhaishajya Kalpana Dept, YMT Ayurvedic Medical College, Kharghar, Navi Mumbai, MHA, India.	This study transformed the traditional preenana modaka formulation into prinana modaka biscuits using Buchanania lanzan, Glycyrrhiza glabra, puffed rice, lump sugar, and jaggery as substitutes for honey. Nutritional analysis was conducted on both forms, traditionally consumed during weaning and suitable for malnourished children aged 1-5, addressing a significant health concern, particularly among economically disadvantaged children in India.

7.3 Chyavanaprasha Avaleha

Reference: AFI, Part I, page 37

बिल्वोऽग्निमन्थः श्योनाकः काश्मर्यः पाटलिर्बला।
पर्ण्यश्वगन्धा पिप्पल्यः श्वदंष्ट्रा बृहतीद्वयम्।।
शृङ्गी तामलकी द्राक्षा जीवन्ती पुष्करागुरु।
अभया चामृता ऋद्धिर्जीवकर्षभकौ शटी।।
मुस्तं पुनर्नवा मेदा सैला चन्दनमुत्पलम्।
विदारी वृषमूलानि काकोली काकनासिका।।
एषां पलोन्मितान् भागाञ्छतान्यामलकस्य च
पञ्च दद्यात्तदैकध्यं जलद्रोणे विपाचयेत्।।
ज्ञात्वा गतरसान्येतान्यौषधान्यथ तं रसम्।
तच्चामलकमुद्धृत्य निष्कुलं तैलसर्पिषोः।।
पलद्वादशके भृष्ट्वा दत्त्वा चार्धतुलां भिषक्
मत्स्यण्डिकायाः पूताया लेहवत्साधु साधयेत्।।
षट्पलं मधुनश्चात्र सिद्धशीते प्रदापयेत्।
चतुष्पलं तुगाक्षीर्याः पिप्पलीद्विपलं तथा।।
पलमेकं निदध्याच्च त्वगेलापत्रकेशरात्।
इत्ययं च्यवनप्राशः परमुक्तो रसायनः।।
कासश्वासहरश्चैव विशेषेणोपदिश्यते।
क्षीणक्षतानां वृद्धानां बालानां चाङ्गवर्धनः।।
स्वरक्षयमुरोरोगं हृद्रोगं वातशोणितम्।
पिपासां मूत्रशुक्रस्थान् दोषांश्चाप्यपकर्षति।।
अस्य मात्रां प्रयुञ्जीत योपरुन्ध्यान्न भोजनम्।
अस्य प्रयोगाच्च्यवनः सुवृद्धोऽभूत् पुनर्युवा।।
मेधां स्मृतिं कान्तिमनामयत्वमायुःप्रकर्षं बलमिन्द्रियाणाम्।
स्त्रीषु प्रहर्षं परमग्निवृद्धिं वर्णप्रसादं पवनानुलोम्यम्।।
रसायनस्यास्य नरः प्रयोगाल्लभेत जीर्णोऽपि कुटीप्रवेशात्।
जराकृतं रूपमपास्य सर्वं बिभर्ति रूपं नवयौवनस्य।।

(Cha.Chi., 1/1/62-74)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Bilva	Rt./ St. Bk.	48 gms
Agnimantha	Rt./ St. Bk.	48 gms
Shyonaka	Rt./ St. Bk.	48 gms
Gambhari	Rt./ St. Bk.	48 gms
Patala	Rt./ St. Bk.	48 gms
Bala	Pl.	48 gms
Shalaparni	Pl.	48 gms
Prishniparni	Pl.	48 gms
Mudgaparni	Pl.	48 gms
Mashaparni	Pl.	48 gms
Pippali	Fr.	48 gms
Gokshura	Pl.	48 gms
Brihati	Pl.	48 gms
Kantakari	Pl.	48 gms
Karkatashringi	Gl.	48 gms
Tamalaki	Pl.	48 gms
Draksha	Dr.Fr.	48 gms
Jivanti	Rt.	48 gms
Pushkara	Rt.	48 gms
Agru	Ht. Wd.	48 gms
Abhaya	P.	48 gms
Amrita	St.	48 gms
Ridhi	Sub. Rt. Tr.	48 gms
Jivaka	Rt. Tr.	48 gms
Risabhaka	Rt. Tr.	48 gms
Shati	Rz.	48 gms
Musta	Rz.	48 gms
Punarnava (Rakta)	Pl.	48 gms
Meda	Rt. Tr.	48 gms
Ela	Sd.	48 gms
Chandana	Ht. Wd.	48 gms
Utpala	Fl.	48 gms

Drug Name	Part Used	Proportion
Vidari	Rt. Tr.	48 gms
Vrishamula	Rt.	48 gms
Kakoli	Sub. Rt.	48 gms
Kakanashika	Fr.	48 gms
Amlaka	Fr.	500 in no
Water for Decoction	–	12.288 L
Reduced to	–	3.072 L
Ghrita	–	288 gms
Taila	Ol.	288 gms
Matsyandika	–	2.400 kg
Madhu	–	288 gms
Tugakshiri	S.C.	192 gms
Pippali	Fr.	96 gms
Twak	St. Bk.	48 gms
Ela	Sd.	48 gms
Patra	Lf.	48 gms
Kesara	Stmn.	48 gms

Procedure:

1. Bundle ripened fresh Amalaki in a piece of cloth.
2. Coarsely powder the ingredients from Bilva to Kakanasika and place them in a vessel.
3. Add 120 liters of water to the vessel. Suspend the Amalakipottali in the vessel and boil the mixture until the water is reduced to one-fourth (30 liters).
4. Remove the Amalaki bundle from the vessel and strain the decoction and keep it separately.
5. Remove the seeds from the boiled Amalaki and make a paste of the pulp.
6. Strain the paste through a piece of cloth or a 40-mesh sieve over a wide-mouthed vessel to remove fibers.
7. Fry the strained pulp with ghrita (ghee) and taila (oil) until the moisture evaporates.
8. Add sugar to the strained decoction and boil the mixture to the lehyapaka stage (semi-solid consistency).
9. Add the fried pulp to the lehya paka and boil the mixture again until well combined.
10. Add the fine powders of ingredients from Tugakshiri to Kesara to the lehya. Stir well and allow the mixture to cool.
11. Once cooled, add madhu (honey) to the mixture and mix thoroughly.
12. Store in air tight container.

Dose: 12- 24 gms.

Anupana: Water, Milk.

Therapeutic Indication: Kasa, Shvasa, Kshata Kshina, Svarabheda, Hridroga, Mutraroga, Ururoga, Vatarakhta, Shukra Dosha, Pippasa, Rasayana, Medhya, Smritiprada, Jara.

PHARMACODYNAMICS

1. Bilva, Agnimantha, Shyonaka, Gambhari, Patala, Bala, Shalaparni, Prshniparni, Mudgaparni, Mashaparni, Pippali, Gokshura, Brihati, Kantakari, Karkatashringi, Tamalaki, Draksha, Jivanti, Pushkara, Agru, Abhaya, Amrita, Ridhi, Jivaka, Rishabhaka, Shati, Musta, Punarnava (Rakta), Meda, Ela, Chandana, Utpala, Vidari, Vrishamula, Kakoli, Kakanasika (all in equal proportions). These herbs collectively possess a wide range of pharmacological activities. They exhibit anti-inflammatory, analgesic, expect-orant, bronchodilator, diuretic, cardioprotective, immunomodulatory, antioxidant, and adaptogenic properties. They are traditionally used to treat respiratory disorders (Kasa, Shvasa), cardiac ailments (Hridroga), urinary problems (Mutraroga), and various other conditions related to inflammation, pain, and weakness.
2. **Amlaka (Emblica officinalis)**: Amlaka is a rich source of vitamin C and antioxidants. It boosts immunity, improves digestion, and has rejuvenating effects. It also supports respiratory health and enhances overall vitality.
3. **Ghrita (Clarified butter) and Taila (Oil)**: Ghrita and Taila serve as carriers for the active constituents of the herbs. They aid in the absorption of fat-soluble compounds and provide nourishment to the body tissues. Additionally, Ghrita has cooling properties and is beneficial for conditions involving Pitta dosha imbalance.
4. **Madhu (Honey)**: Madhu acts as a sweetening agent and enhances the palatability of the formulation. It also possesses antimicrobial properties and supports respiratory health.
5. **Tugakshiri**: Tugakshiri has diuretic properties and is beneficial for urinary disorders. It helps in flushing out toxins from the body and maintains renal health.
6. **Tvak (Cinnamon), Ela (Cardamom), Patra (Cinnamomum tamala), Kesara (Saffron)**: These spices add flavor and aroma to the formulation. They also have medicinal properties, including antioxidant, anti-inflammatory, and digestive stimulant effects.

PHARMACOKINETICS

1. **Absorption**: The active constituents of the herbs are absorbed in the gastrointestinal tract after ingestion. Some components may undergo first-pass metabolism in the liver before entering systemic circulation.

2. **Distribution**: Once absorbed, the phytochemicals are distributed throughout the body via the bloodstream, reaching target organs and tissues where they exert their therapeutic effects.
3. **Metabolism**: Metabolism of the herbal constituents may occur in the liver, where they are broken down into metabolites that are either active or inactive. Metabolites may undergo further biotransformation before elimination.
4. **Excretion**: Metabolites and unutilized components are excreted primarily through urine and feces. The rate of excretion varies depending on the solubility and molecular weight of the compounds.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Chyawanprash: A Traditional Indian Bioactive Health Supplement	Rohit Sharma, Central Ayurveda Research Institute for Drug Development (CCRAS), Ministry of AYUSH, Government of India, 4-CN Block, Sector-V, Bidhannagar, Kolkata-700091, WB India; medamrao69@gmail.com	Chyavanaprasha preparation involves decocting herbs, extracting, mixing with honey, and adding aromatic powders. The final product resembles fruit jam, with a sweet, sour, and spicy taste. Scientific exploration is needed to understand its therapeutic potential due to scattered information. Efforts were made to compile data from various sources, including ancient texts and scientific literature, to highlight CP's therapeutic role.
2.	Chyawanprash: An Ayurvedic Bioactive Immune & Curative Health Supplement	Sneha Jadhav, Department of Pharmaceutics Vasantidevi Patil Institute of Pharmacy, Kodoli Tal-Panhala, Dist- Kolhapur-416114, MH	Chyavanaprasha, crafted from 50 Ayurvedic herbs, is a popular dietary supplement in India. It boosts muscle strength, rejuvenates cells, balances doshas, slows aging, enhances memory, and supports heart health, and aids digestion and respiratory functions.
3.	Golden Ager Chyawanprash with Meager Evidential Base from Human Clinical Trials	Rohit Sharma, Depart. of RSBK, Faculty of Ayurveda, Institute of Medical Sciences, Banaras Hindu University, Varanasi-221005, Uttar Pradesh, India	The report aims to dispel Chyavanaprasha usage misconceptions and guide researchers in bioactive natural products, drug development, functional foods, and nutraceuticals. National experts should convene to establish standardized CP research protocols.
4.	Pharmaceutical standardization of Chyawanprash prepared by two different methods	Bharat Rathi, Professor, Dept. of RSBK, Mahatma Gandhi Ayurved College, Salod, Maharashtra, India.	The study compared pharmacy and traditional Chyavanaprasha preparation methods, favoring the pharmacy approach due to better outcomes in time, yield, and physicochemical properties. Notably, frying in non-polar media may alter ascorbic acid. Considering polarity's impact on absorption, pharmacy-prepared Chawanaprash may offer superior efficacy, pending further validation.

7.4 Phala Ghrita

Reference: AFI, Part I

मञ्जिष्ठाकुष्ठतगरत्रिफलाशर्करावचाः।।
द्वे निशे मधुकं मेदां दीप्यकः कटुरोहिणीम्।
पयस्याहिंगुकाकोलीवाजिगन्धाशतावरीः।।
पिष्ट्वाऽक्षांशैर्घृतप्रस्थं पचेत्क्षीरचतुर्गुणम्।
योनिशुक्रप्रदोषेषु तत्सर्वेषु प्रशस्यते।।
आयुष्यं पौष्टिकं मेध्यं धन्यं पुंसवनं परम्।
फलसर्पिरिति ख्यातं पुष्पे पीतं फलाय यत्।।
म्रियमाणप्रजानां च गर्भिणीनां च पूजितम्।
एतत्परं च बालानां ग्रहघ्नं देहवर्धनम्।।

(A.H.U., 34/63-67)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Manjishtha	Pl.	12 gms
Kushtha	Rt.	12 gms
Tagara	Rt.	12 gms
Haritaki	P.	12 gms
Bibhitaki	P.	12 gms
Amalaki	P.	12 gms
Sharkara	—	12 gms
Vacha	Rz.	12 gms
Haridra	Rz.	12 gms
Daruharidra	St.	12 gms
Yashti	Rt.	12 gms
Meda	Rt. Tr.	12 gms
Yavani	Fr.	12 gms
Katuka	Rt.	12 gms
Kshira vidari	Rt. Tr.	12 gms
Hingu	Exd.	12 gms
Kakoli	Sub. Rt.	12 gms
Asvagandha	Rt.	12 gms
Shatavari	Rt. Tr.	12 gms
Go Ghrita	—	768 gms
Go Dugdha	—	3.072 l

Procedure:

1. **Preparation of Kalka Dravya:**
   - Take all the ingredients for Kalka Dravya (Manjishtha to Shatavari) and grind them into a fine powder (Churna).
   - Add a sufficient quantity of water to the powdered herbs to make a thick paste (bolus form).
2. **Preparation of Drava Dravya:**
   - Collect Go - Dugdha as drava dravya
3. **Mixing:**
   - In a clean vessel, add Go-Ghrita as mention quantity along with Kalka Dravya and Drava Dravya.
4. **Heating:**
   - Place the mixture over a low flame. Stir continuously to prevent the Kalka from sticking to the bottom and ensure even cooking.
   - Maintain a consistent low flame to avoid burning the ingredients. Heat the mixture until the water content evaporates and sneha siddhi lakshanas.
5. **Filtering:**
   - Once the Sneha siddhi lakshana attains, remove it from the heat.
   - Filter the ghrita through a clean, dry cloth to remove the solid residues of the herbal paste.
6. **Cooling and Storage:**
   - Allow the filtered Ghrita to cool down to room temperature.
   - Store it in a clean, dry, airtight container. Keep the container in a cool, dark place to preserve the potency of the medicated oil or ghee.

Dose: 12 gms.

Anupana: Warm Water.

Therapeutic Indications: Bala Roga, Bala Graha, Shukra Vikara, Yoni Vikara, Vandhyatva, Garbhini Roga, Karshya.

PHARMACODYNAMICS

1. Manjishtha, Kushtha, Tagara, Haritaki, Bibhitaki, Amalaki, Haridra, Daruharidra, Yashti, Meda, Yavani, Katuka, Kshira Vidari, Hingu, Kakoli, Ashvagandha, Shatavari: These herbs collectively exhibit various pharmacological actions including anti-inflammatory, immunomodulatory, antioxidant, adaptogenic, nervine, and rejuvenating properties. They are traditionally used in Ayurveda to support overall health and vitality, enhance immunity, and promote reproductive health.
2. **Go Ghrita (Cow ghee) and Go-Dugdha (Cow milk):** These dairy products serve as the base for the formulation, aiding in the absorption of lipid-soluble constituents and providing nourishment to the body. They also act as carriers for fat-soluble vitamins and other bioactive compounds present in the formulation.

PHARMACOKINETICS

1. **Absorption**: The active constituents of the herbs are absorbed in the gastrointestinal tract, where they enter the bloodstream and exert their pharmacological effects.
2. **Distribution**: Once absorbed, the components are distributed throughout the body via the bloodstream, reaching various tissues and organs.
3. **Metabolism**: Metabolism of the herbal constituents occurs primarily in the liver, where they may undergo biotransformation into active metabolites or inactive forms for excretion.
4. **Excretion**: Metabolites and unutilized components are excreted mainly through urine and feces, although some may undergo entero-hepatic circulation.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Effect of Phala Ghrita on Development of Ovarian Follicle Followed by Bijotsarga (Ovulation) in Patients of Infertility Due to Ovarian Factor in Comparison with Clomiphene Citrate	Mohan Yende PhD (Scholar), Mahatma Gandhi Ayurved College and Research Centre, Salod, MHA, Warddha, MHA	In a single-blind randomized controlled trial, 30 participants in each group receive either Phala Ghrita (10 ml B.D. with cow milk 100 ml Anupana) or Tab. Clomiphene citrate (50 mg O.D. from day 3 to 7 of menstrual cycle). Primary outcomes assess follicle development and ovulation, with secondary outcomes evaluating conception. The conclusion will address Phala Ghrita's observed effects.
2.	Clinical Trial of Phala ghrita on Female Infertility	Dr. S.P. Otta, Lecturer, in Prasuati & stree roga, N.K. J. Ayurvedic medical college & P.G. Center, Bidar, Karnataka	The study involved 30 cases of female infertility treated with intrauterine insufflation of Phalagritam. After three consecutive cycles, encouraging results were observed, detailed in the full paper.
3.	Phamacognostical and Phramacuetical Analysis of Phala Ghrita—An Ayurvedic Polyherble Formulation	Jitendra Varsakiya, Ph.D Scholar, Depart. of Kayachikitsa, Ayurveda, Gujarat Ayurved University, Gujarat University, Jamnagar, Gujarat.	Pharmacognostical study: Ashvagandha starch, Bibhitaki tannic contents, Haridra oil resin, Manjishtha crystals, Shatavari raphides and vessels, Tagar cells. Yashtimadhu had compound starch. Pharmaceutical evaluation: 13% w/w drying loss, pH 5.5. HPTLC: 8 spots at 254nm, 4 spots at 366 nm.

Sr.No.	Article Name	Author Name	Result
4.	Efficacy of *Phala Ghrita* and Cow Ghee in the Management of Oligozoospermia– A Comparative Clinical Study	Varsakiya, Dept. of Kayachikitsa, CBPACS, New Dehli - 110073.	Ninety-nine males with oligospermia (sperm count <15 million/mL) underwent Ayurvedic Bio-cleansing using Haritakyadi Yoga. PHG (n=51) and CG (n=42) received 10g twice daily with warm milk for 8 weeks. Both groups showed significant improvements in sperm parameters, with PHG demonstrating better outcomes except for semen volume.
5.	Efficacy of Phala Ghrita on Female Infertility	Shalini Biala, M.S. Scholar, Depart. of Post Graduate Studies in Prasooti Tantra & Stree Roga, Major S.D. Singh P.G. Ayurvedic Medical College, Farrukhabad, (U.P.), India	Oral Phala-ghrita for three months resulted in 22% pregnancy in female infertility patients with no adverse effects. Despite encouraging results, conception rates are low. Further large-scale studies with alternative administration methods are needed for better outcomes.

7.5 Saubhagya Shunthipaka

Reference: AFI, Part I

कशेरुशृङ्गाटवराटमुस्तं द्विजीरकं जातिफलं सकोषम्।
लवङ्गशैलेयसनागपुष्पं पत्रं वराङ्गं शटिघातकी च।।
एला शताह्वा धनिकेभपिप्पली सपिप्पली सोषणका शतावरी।
प्रत्येकमेषामिह कर्षयुग्मं लौहं तथाभ्रं पलभागयुक्तम्।।
महौषधाच्चूर्णपलानि चाष्टौ पलानि त्रिंशत्सितशर्कराया:।
पलानि चाष्टावपि सर्पिषश्च प्रस्थद्वयं क्षीरमिह प्रयुक्तम्।।
पचेद्विधिज्ञ: परमादरेण खादेदिदं शाणमथापि कोलम्।
कर्षोन्मितं वापि समीक्ष्य शस्तं सौभाग्यशुण्ठी कथिता भिषग्भि:।।
अग्निप्रदा सूतिगदापहा च सर्वातिसारग्रहणीहरा च।।

(B.R., Striroga, 69/396-399)

Ingredients Used

Drug Name	Part Used	Proportion
Kasheru	Rt. Tr.	24 gms
Shrigataka	Fr.	24 gms
Kamala	Sd.	24 gms
Musta	Rz.	24 gms
Shveta Jiraka	Fr.	24 gms
Krishna Jiraka	Fr.	24 gms
Jatiphala	Sd.	24 gms
Jatikosha	Ar.	24 gms
Lavanga	Fl. Bd	24 gms
Shaileya	Pl.	24 gms
Nagakesara	Stmn.	24 gms
Tejapatra	Lf.	24 gms
Tvak	St. Bk.	24 gms
Shati	Rz.	24 gms
Dhataki	Fl.	24 gms
Ela	Sd.	24 gms
Shatahva	Fr.	24 gms
Dhanyaka	Fr.	24 gms
Gajapippali	Fr.	24 gms
Pippali	Fr.	24 gms
Maricha	Fr.	24 gms
Shatavari	Rt. Tr.	24 gms
Lauha Bhasma	–	48 gms
Abhraka Bhasma	–	48 gms
Shunthi	Rz.	384 gms
Sita	–	1.440 kg
Go Ghrita	–	384 gms
Kshira	–	1.536 l

Procedure:

1. First, Shunthi is taken and then cow's milk is added to it.
2. Cooked thoroughly until it reaches a semi-solid consistency (Mava/ Khoya).
3. Then paste of Sunthi is fried in ghee.
4. Separately, in a stainless steel utensil, required water and sugar are mixed and cooked to form 4-5 thread consistency.
5. Afterward, all the remaining drugs are added to the syrup.
6. Stir well until suitable for tablets form (Modaka shape).
7. Allow the mixture to cool.
8. Store in air tight container.

Dose: 12 gms.

Anupana: Water, Milk.

Therapeutic Indications: Agnimandya, Atisara, Grahani, Sutikaroga.

Pharmacodynamics

1. Kasheru, Shringataka, Kamala, Musta, Shveta Jiraka, Krishna Jiraka, Jatiphala, Jatikosha, Lavanga, Shaileya, Nagakesara, Tejapatra, Tvak, Shati, Dhataki, Ela, Shatahva, Dhanyaka, Gajapippali, Pippali, Maricha, Satavari: These herbs possess various pharmacological properties such as digestive stimulant, carminative, anti-diarrheal, anti-inflammatory, antimicrobial, and anti-flatulent activities. They work synergistically to improve

digestion, relieve gastrointestinal symptoms, and promote overall gut health.

2. **Lauha Bhasma and Abhraka Bhasma:** These mineral preparations contribute to the formulation's therapeutic efficacy by providing bioavailable iron and essential minerals, which play crucial roles in maintaining hemoglobin levels, cellular metabolism, and overall health.
3. **Shunthi (Ginger) and Sita (Sugar):** These ingredients serve as carriers and enhancers, aiding in the absorption and assimilation of active constituents, and also imparting palatability to the formulation.
4. **Go-Ghrita (Cow ghee) and Kshira (Milk):** These dairy products serve as the base for the formulation, enhancing the absorption of lipid-soluble constituents and providing nourishment to the body.

PHARMACOKINETICS

1. **Absorption**: The active constituents of the herbs and mineral bhasmas are absorbed in the gastrointestinal tract, where they enter the bloodstream and exert their pharmacological effects.
2. **Distribution**: Once absorbed, the components are distributed throughout the body via the bloodstream, reaching various tissues and organs, including the gastrointestinal tract.
3. **Metabolism**: Metabolism of the herbal constituents and mineral bhasmas occurs primarily in the liver, where they may undergo biotransformation into active metabolites or inactive forms for excretion.
4. **Excretion**: Metabolites and unutilized components are excreted mainly through urine and feces, although some may undergo enterohepatic circulation.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Pharmaceutical preparation of *Saubhagya Shunthi Churna*: A herbal remedy for Puerperal women	Khushbu Shukla Department of Rasa Shastra, Institute Medical Sciences Banaras Hindu University, Varanasi - 221 005, U.P., India.	The study aimed to standardize Saubhagya Shunthi Churna, a powdered form of the traditional Ayurvedic Saubhagya Shunthi Paka. It enhances stability and simplifies preservation. Microbial load and nutrient values were assessed using IS and AOAC methods. The Churna showed 17.64% weight loss and higher energy content compared to Paka. Saubhagya Shunthi Churna holds promise as a therapeutic and dietary option for Indian women, easily prepared at home.
2.	Theoretical Establishment of Maintenance of Health of Sutika through Bioactive Ingredients of Saubhagya Shunthi Pak	Kamde Rahulkumar, Assistant Professor (Prasutitantra & Streeroga); KVTR Ayurved College, Boradi, Dist. Dhule 425428, MHA, India	The article reviews the bioactive compounds in the herbal ingredients of Saubhagya Shunthi Pak. It compares the desirable effects and contributing bioactive components to conclude that consuming Saubhagya Shunthi Pak as a dietary supplement can fulfill most of the needs of a puerperal woman.

7.6 Shatavari Ghrita

Reference: Chakradatta- Amalapitta Chikitsa.

शतावरीमूलकल्कं घृतप्रस्थं पयः समम्।
पचेन्मृद्वग्निना सम्यक् क्षीरं दत्त्वा चतुर्गुणम्।।
नाशयेदम्लपित्तञ्च वातपित्तोत्तरान् गदान्।
रक्तपित्तं तृषां मूर्च्छां श्वाससन्तापमेव च।।

(Nighantu Ratnakara, Chakradatta, p. 300)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Haritaki	P.	25 gms
Bibhitaki	P.	25 gms
Amalaki	P.	25 gms
Musta	Rz.	25 gms
Haridra	Rz.	25 gms
Nimbu	Fr.	Q.S.
Go Ghrita	–	600 ml
Jala	–	2400 ml

Procedure:

1. **Preparation of Kalka Dravya:**
   - Take all the ingredients for Kalka Dravya (Haritaki to Haridra) and grind them into a fine powder (Churna).
   - Add a sufficient quantity of nimbu svarasa to the powdered herbs to make a thick paste (bolus form).
2. **Preparation of Drava Dravya:**
   - Jala as drava dravya.
3. **Mixing:**
   - In a clean vessel, add Go Ghrita as mention quantity along with Kalka Dravya and Drava Dravya.
4. **Heating:**
   - Place the mixture over a low flame. Stir continuously to prevent the Kalka from sticking to the bottom and ensure even cooking.

- Maintain a consistent low flame to avoid burning the ingredients. Heat the mixture until the water content evaporates and sneha siddhi lakshanas.

5. **Filtering:**
   - Once the Sneha siddhi lakshana attains, remove it from the heat.
   - Filter the ghrita through a clean, dry cloth to remove the solid residues of the herbal paste.
6. **Cooling and Storage:**
   - Allow the filtered Ghrita to cool down to room temperature.
   - Store it in a clean, dry, airtight container. Keep the container in a cool, dark place to preserve the potency of the medicated oil or ghee.

Dose: 12-24 ml.

Anupana: Luke Warm Water.

Therapeutic Indications: Vatarakta.

PHARMACODYNAMICS:

1. **Haritaki, Bibhitaki, Amalaki**: These three fruits, collectively known as Triphala, exhibit a wide range of pharmacological activities including antioxidant, anti-inflammatory, immunomodulatory, hepatoprotective, and digestive stimulant properties. They are beneficial in detoxification, promoting digestion, regulating bowel movements, and improving overall health.
2. **Musta**: Musta possesses anti-inflammatory, anti-diarrheal, anti-ulcer, and hepatoprotective properties. It helps in reducing inflammation, promoting gastrointestinal health, and protecting the liver.
3. **Haridra (Turmeric)**: Haridra is well-known for its anti-inflammatory, antioxidant, antimicrobial, and immunomodulatory properties. It helps in reducing inflammation, boosting immunity, and supporting overall health.
4. **Nimbu (Lemon)**: Lemon juice acts as a natural preservative and enhances the palatability of the formulation. It also provides a natural source of vitamin C, which has antioxidant properties and supports immune function.
5. **Go Ghrita (Cow ghee)**: Cow ghee serves as the base for the formulation, enhancing the absorption of lipid-soluble constituents and providing nourishment to the body.

PHARMACOKINETICS

1. **Absorption**: The active constituents of the herbs are absorbed in the gastrointestinal tract, where they enter the bloodstream and exert their pharmacological effects.
2. **Distribution**: Once absorbed, the components are distributed throughout the body via the bloodstream, reaching various tissues and organs, including the joints affected by Vatarakta.
3. **Metabolism**: Metabolism of the herbal constituents occurs primarily in the liver, where they may undergo biotransformation into active metabolites or inactive forms for excretion.
4. **Excretion**: Metabolites and unutilized components are excreted mainly through urine and feces.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	A Review on Shatavari Ghrita	Dr. Sourav Pal, Ph. scholar, Department of Rasashastra and Bhaishajya Kalpana, SDM College of Ayurveda & Hospital, Hassan, Karnataka-India	Thirteen references to Shatavari Ghrita are found in Ayurvedic texts. Murchcchita Go-Ghrita is consistently used as the base, with a standard dose of 1 pala (48ml). Commonly indicated for various conditions, the formulation includes Shatavari Mula Svarasa, cow milk, Shatavari Kvatha, and water as Drava Dravya. Kalka Dravya varies, with Yashtimadhu and Gokshura being common choices. Some formulations include additional ingredients like Pippali Churna and honey. Sahasrayogam mentions Shatavaryadi Ghrita, which features Shatavari Mula Svarasa and Gokshura Svarasa as Drava Dravya, and various herbs as Kalka Dravya.
2.	The Pharmaceutico-Analytical Study of Shatavari Ghrita	Sourav Pal, Department of Agadtanta, Dayanand Ayurvedic P.G. Medicalcollege & Hospital, Siwan, Bihar, India	The aim was to prepare Shatavari Ghrita pharmaceutically and analyze its materials. The formulation falls under sneha kalpana, prepared using the general method for sneha preparation, and is indicated for Amlapitta. The pharmaceutical study revealed no errors in its preparation, while analytical parameters established preliminary standards for Shatavari Ghrita. Additionally, GCMS analysis aided in identifying active components within the sample.
3.	Effect of Shatavari Ghrita (Polyherbal Formulation) on Testicular Dysfunction in Streptozocin Induced Diabetes in Wistar Albino Rats	Nishvanth F, College of Pharmacy, Madras Medical College, Chennai-03, T.N., India	The study investigated Shatavari Ghrita's impact on streptozocin-induced diabetic testicular dysfunction in rats. Doses were determined through acute toxicity testing (400 mg/kg and 200 mg/kg). Thirty rats were divided into control and treatment groups. After 60 days, SG at 400mg/kg showed improvements in sperm parameters, reproductive organ weight, testosterone level, antioxidant activity, and reduced blood glucose levels. These results suggest SG's potential in reversing diabetes-induced testicular dysfunction.

Sr.No.	Article Name	Author Name	Result
4.	A comparative clinical study of Shatavari Ghrita ashchyotana and Carboxy methyl cellulose 0.5% eye drop in the management of dry eyes with special reference to smartphone users	Rasika R. Bansod	**Aim:** Compare Shatavari Ghrita Ashchyotana and Carboxymethylcellulose 0.5% eye drops for treating Shushkakshipaka (Dry eye syndrome). 70 patients aged 20-30 with dry eye symptoms were randomly assigned to receive either Shatavari Ghrita Aschyotana or Carboxymethylcellulose 0.5% eye drops. **Results:** Shatavari Ghrita Aschyotana showed superior efficacy compared to Carboxymethylcellulose 0.5% eye drops.

7.7 Arjuna Kshirapaka

Reference: B.R., Hridroga

अर्जुनस्य त्वचा सिद्धं क्षीरं योज्यं हृदामये।
सितया पञ्चमूल्या वा बलया मधुकेन वा।।

(B.R., Hridroga, 33/11)

Ingredients Used

Drug Name	Part Used	Proportion
Arjuna	Bk.	20 gms
Go Kshira	–	160 ml
Jala	–	640 ml
Reduced to	–	160 ml

Procedure:

1. Gather all the required ingredients, including Arjuna bark and milk. Ensure the ingredients are clean and free from impurities.
2. In a stainless steel vessel, combine all the ingredients. The primary ingredient should be Arjuna bark, and the liquid used will be a mixture of water and milk.
3. Add the required amount of water and milk to the vessel. The typical ratio is 1 part (20 gms) of Arjuna bark, 32 parts (640 ml) of water, and 8 parts (160 ml) of milk.
4. Reduce the heat and let it simmer. Continue to boil until the water portion evaporates and only the milk portion is left.
5. Stir the mixture occasionally to prevent the ingredients from sticking to the bottom of the vessel and to ensure even boiling.
6. Once the water has evaporated and only the milk portion remains, remove the vessel from heat.
7. Filter the mixture through a clean cloth or a fine sieve to remove the solid residues.

Dose: 50 ml.

Therapeutic Indications: Hridroga.

Pharmacodynamics

1. **Arjuna (Terminalia arjuna):** Arjuna bark is rich in bioactive compounds like flavonoids, tannins, saponins, and minerals. It exhibits cardio protective properties by strengthening the heart muscles, improving cardiac function, and reducing the risk of cardiovascular diseases. Arjuna also has antioxidant, anti-inflammatory, and hypolipidemic effects, which contribute to its therapeutic efficacy in heart diseases.
2. **Go Kshira (Cow's milk):** Cow's milk serves as the base for the formulation, providing essential nutrients like calcium, proteins, vitamins, and minerals. It nourishes the body, supports overall health, and enhances the absorption of bioactive constituents from Arjuna bark.

Pharmacokinetics

1. **Absorption:** The bioactive compounds from Arjuna bark are absorbed in the gastrointestinal tract, particularly in the stomach and intestines, and enter the bloodstream.
2. **Distribution:** Once absorbed, these compounds are distributed throughout the body, reaching the heart and other target tissues.
3. **Metabolism:** The constituents undergo metabolism primarily in the liver, where they may undergo biotransformation into active metabolites or conjugated forms.
4. **Excretion:** Metabolites and unutilized components are excreted mainly through urine and feces.

Research Updates

Sr.No.	Article Name	Author Name	Result
1.	Pharmaceutical Development of Arjuna Kshirapaka Powder Prepared From Different Methods & Its Analytical Evaluation	Sinduja, V., Final Year PG Scholar, Dept. of Rasa Shastra and Bhaishajya Kalpana, Parul Institute of Ayurved, Parul University, Vadodara, Gujarat, India.	Four methods were used to prepare Arjuna Kshirapaka, which were then converted into powder using a spray drier. The percentages of powder obtained were: Method 1 – 5%, Method 2 – 2.39%, Method 3 – 4.025%, and Method 4 – 5.66%. High Performance Thin Layer Chromatography (HPTLC) at 540nm revealed the number of unaltered chemical constituents: Method 1 – 2, Method 2 – 3, Method 3 – 6, and Method 4 – 5. Physico-chemical parameters and HPTLC analysis showed that Sharangdhara's method retained six chemical constituents from the raw drug in the ksheerapaka powder.

Sr.No.	Article Name	Author Name	Result
2.	Modification of Drug dosage Form of Arjuna Kshirapaka by using Spray Drying Technology	Swapnil Talmale, PG Scholar, Rasashastra & Bhaishajya Kalpana Department, Mahatma GandhiAyurved College, Hospital & Research Centre, Wardha, Maharashtra, India	The study prepared Arjuna Kshirapaka according to classical methods and converted it into spray-dried powder. Both forms showed similar characteristics and chemical properties. The spray-dried powder exhibited increased stability and convenience for storage and consumption compared to the traditional form.
3.	Ayurveda Management of Traumatic Arthritis of Knee (Janu Vata) with Special Reference to Arjuna Kshira Paka—A Clinical Study	Suguna K. Ph.D. Scholar P.G. Department of Dravyaguna S.V. Ayurvedic College Tirupati, A.P.	In a clinical study, 40 traumatic arthritis patients aged 35-65 were randomly assigned to receive Terminalia arjuna powder (TAP) or Terminalia arjuna Kshirapaka powder (TAKP). Both groups showed similar outcomes in fatigue, pain, and walking time, but Group II exhibited better reduction in restricted movement, while Group I showed superior inflammation reduction. Group II demonstrated significantly improved results, likely due to synergistic effects of Arjuna's properties and milk. No complications were reported. The study highlights TAKP's potential efficacy in managing traumatic arthritis.
4.	A Pharmacological Study on Ayurveda Management on Healing Process of Tibia of Rats with Special Reference to Arjuna Kshira Paka	K.Suguna, Ph.D. Scholar, P.G. Department of Dravyaguna, S.V. Ayurvedic College, Tirupati, A.P., India.	The study assessed Terminalia arjuna's impact on rat tibia fractures. Rats received TAP (powder) boiled with milk (Group I), TAKP (Group II), or placebo (Group III). By day 30, Groups I and II showed improved healing, with Group II exhibiting earlier calcification by day 20. TAKP demonstrated significant efficacy in calcification compared to other groups.
5.	Evaluation of Combined Effect of Arjuna Kshirapaka and Posterior Slab with Standard of Care in Radius Fracture: A Comparative Clinical Trial	Athira Krishnan, PG Scholar, Department of Shalya tantra, Amrita School of Ayurveda, Kollam, Kerala, India.	The study analyzed Arjuna Kshirapaka's bone healing effects in 30 patients. Results showed an 80% cure rate with Kshirapaka versus 53.3% with standard treatment. Combining Kshirapaka with milk enhances Arjuna's active principles, aiding bone tissue regeneration. Conclusion: Arjuna Kshirapaka, alongside POP posterior slab, significantly improves healing in radius fractures compared to standard care alone.

7.8 Rasona / Lashuna Kshira Paka

Reference: B.R., Gulma, Rogadhikara

साधयेच्छुद्धशुष्कस्य लशुनस्य चतुष्पलम्।
क्षीरोदकेष्टगुणिते क्षीरशेषञ्च पाययेत्।।
वातगुल्ममुदावर्त्तं गृध्रसीं विषमज्वरम्।
हृद्रोगं विद्रधिं शोथं नाशयत्याशु तत्पयः।
एवन्तु साधिते क्षीरे स्तोकमेवात्र दीयते।।

(B.R., Gulma Rogadhikara, 32/13-14)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Nishtusha Lashsuna	Bud	192 gms
Go Kshira	–	768 ml
Jala	–	768 ml
Reduced to	–	768 ml

Procedure:

1. Gather all the required ingredients, including Lashuna/Garlic Bud and milk. Ensure the ingredients are clean and free from impurities.
2. In a stainless steel vessel, combine all the ingredients. The primary ingredient should be Lashuna, and the liquid used will be a mixture of water and milk.
3. Add the required amount of water and milk to the vessel. The typical ratio is 1 part (192 gms) of Nishtusha Lashuna, 8 parts (768 ml) of water, and 8 parts (768 ml) of milk.
4. Reduce the heat and let it simmer. Continue to boil until the water portion evaporates and only the milk portion is left.
5. Stir the mixture occasionally to prevent the ingredients from sticking to the bottom of the vessel and to ensure even boiling.
6. Once the water has evaporated and only the milk portion remains, remove the vessel from heat.
7. Filter the mixture through a clean cloth or a fine sieve to remove the solid residues.

Dose: 100 ml.

Therapeutic Indications: Gulma, Gridhrasi, Vishama Jvara, Hridroga, Vidradi, Shotha.

PHARMACODYNAMICS:

1. **Nishtusha Lahshuna (Garlic):** Garlic contains bioactive compounds like allicin and sulphur compounds, which exhibit various pharmacological effects. It has anti-inflammatory, antimicrobial, antioxidant, and immunomodulatory properties.

Garlic also possesses vasodilatory effects, lowers blood pressure, reduces cholesterol levels, and improves cardiovascular health. Additionally, it has antiplatelet and fibrinolytic activities, which help in preventing clot formation and reducing the risk of cardiovascular diseases.

2. **Go Kshira (Cow's milk)**: Cow's milk serves as a vehicle for delivering the bioactive constituents of garlic. It provides essential nutrients like proteins, vitamins, and minerals, which support overall health and enhance the absorption of garlic's beneficial compounds.

PHARMACOKINETICS

1. **Absorption**: The bioactive compounds from garlic are absorbed in the gastrointestinal tract, particularly in the stomach and intestines, and enter the bloodstream.
2. **Distribution**: These compounds are distributed throughout the body, reaching target tissues such as the liver, heart, and blood vessels.
3. **Metabolism**: Garlic compounds may undergo metabolism in the liver, where they are biotransformed into active metabolites or conjugated forms.
4. **Excretion**: Metabolites and unutilized components are excreted primarily through urine and feces.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Process Stand Ardisation and Selection of A Method of Drying for the Industrial Production of Rasona Kshirapakam—A Dairy Based Nutraceutical	P. Sudheer Babu Kerala Agricultural University Dairy Plant, Mannuthy, Thrissur (Kerala) India	An investigation was conducted to streamline unit operations for producing Rasona Kshirapaka, a dairy-based nutraceutical. Different drying methods, such as roller, cabinet, and spray drying, were tested, with spray drying emerging as the optimal choice based on sensory evaluation for industrial-scale production.
2.	Pharmaceutical and Analytical Evaluation of Lashuna Kshirpaka W.S.R to Charaka and Sharangadhara Methods.	Nilesh Suryawanshi Dr. D. Y. Patil College of Ayurved & Research Institute, Nerul, Navi Mumbai, MHA, India	Samples prepared according to Charaka Samhita and Sharngadhara Samhita were tested. Gas Chromatography showed higher Allin retention in Charaka Samhita sample (C: 0.410 mg/gm) than in Sharangadhara Samhita sample (S: 0.211 mg/gm). Thus, Charaka Samhita's Lasuna Kshirapaka better preserves Allin, enhancing Garlic's medicinal properties compared to Sharngadhara Samhita.

7.9 Kharjuradi Mantha

Reference: Sha. Samhita Madhyam Khanda

खर्जूरदाडिमीद्राक्षातिन्तिडीकाम्लिकामलैः।।
सपरूषैः कृतो मन्थः सर्वमद्यविकारनुत्। (Sha. S.M. Kha. 3/10)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Khajura	Fr.	1 Part
Dadima	Sd.	1 Part
Munnaka	Fr.	1 Part
Imali	P.	1 Part
Changeri	Lf.	1 Part
Amalaki	Fr.	1 Part
Phalasha	Fr.	1 Part
Jala	–	4 Parts

Procedure:

1. Obtain all the required ingredients for Kharjuradi Mantha. Ensure each ingredient is clean and free from impurities.
2. Using a Khalva Yantra, grind all the ingredients together to make a fine paste.
3. Transfer the paste into a clean earthen pot and add four times the amount of water to the paste.
4. Allow the mixture to soak in the water for 1 to 2 hours.
5. After soaking, churna the mixture thoroughly. Rub the contents with your hands to ensure maximum extraction of the medicinal properties.
6. Filter the mixture through a clean cloth to remove the solid residues.
7. Collect the filtered liquid in a clean container. This liquid is known as Kharjuradi Mantha.

Dose: 2 Pala.

Therapeutic Indications: Madhatya.

PHARMACODYNAMICS

1. Kharjuradi Mantha is a combination of several herbs, each chosen for its specific properties and effects on the body according to Ayurvedic principles.
2. Khajura (Dates), Dadima (Pomegranate), Munnaka (Raisins), Imali (Tamarind), Changeri (Oxystelma esculentum), Amalaki (Indian Gooseberry), and Phalasa (Jackfruit) all possess various pharmacological properties such as anti-inflammatory, antioxidant, digestive, and nervine tonic properties.

3. When combined, these herbs work synergistically to pacify disturbances associated with Madhatya (a condition related to mental agitation). Dadima, for instance, is known for its cooling and calming properties, while Amalaki helps balance the mind and improve mental clarity.
4. The formulation as a whole aims to restore balance to the body and mind, alleviating symptoms associated with Madhatya.

PHARMACOKINETICS

1. Upon ingestion, the herbs are digested and metabolized in the gastrointestinal tract. The active constituents are then absorbed and transported to various tissues and organs via the bloodstream.
2. The absorption and distribution of the herbs may be influenced by factors such as the individual's digestive capacity, metabolism, and the strength of their agni (digestive fire) according to Ayurvedic principles.
3. Once absorbed, the herbs exert their therapeutic effects on the body, including the mind, to alleviate symptoms of Madhatya.
4. Execute through urine on Feces on sweating.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	A Review on Pharmacodynamics Properties of the Ingredients of Kharjuradi Mantha and Uses of Kharjuradi Mantha For Madathya (Alcoholism) in Ayurveda	S.P.A.S. Nishan, Unit of Allied Sciences, Institute of Indigenous Medicine, University of Colombo.	Kharjuradi Mantha balances Doshas in alcoholism with Tridosha and Pitta Shamaka properties, stimulates Jataragni for detoxification, and enhances immunity through Rasayana effects. It's effective in treating alcoholism and related disorders in Ayurveda, but further research is needed for comprehensive evaluation.

7.10 Brahma Rasayana

Reference: AFI, Part I

पथ्यासहस्रं त्रिगुणधात्रीफलसमन्वितम्।
पञ्चानां पञ्चमूलानां सार्धं पलशतद्वयम्।।
जले दशगुणे पक्त्वा दशभागस्थिते रसे।
आपोथ्य कृत्वा व्यस्थीनि विजयामलकान्यथ।।
विनीय तस्मिन्निर्यूहे योजयेत्कुडवांशकम्।
त्वगेलामुस्तरजनीपिप्पल्यगुरुचन्दनम्।।
मण्डूकपर्णीकनकशङ्खपुष्पीवचाप्लवम्।
यष्ट्याह्वयं विडङ्गं च चूर्णितं तुलयाऽधिकम्।।
सितोपलार्धभारं च पात्राणि त्रीणि सर्पिषः।
द्वे च तैलात्पचेत्सर्वं तदग्नौ लेहतां गतम्।।
अवतीर्णं हिमं युञ्ज्याद्विंशैः क्षौद्रशतैस्त्रिभिः।
ततः खजेन मथितं निदध्याद् घृतभाजने।।
या नोपरुन्ध्यादाहारमेकं मात्रास्य सा स्मृता।
षष्टिकः पयसा चाऽत्र जीर्णे भोजनमिष्यते।।
वैखानसा बालखिल्यास्तथा चाऽन्ये तपोधनाः।
ब्रह्मणा विहितं धन्यमिदं प्राश्य रसायनम्।।
तन्द्राश्रमक्लमवलीपलितामयवर्जिताः।
मेधास्मृतिबलोपेता बभूवुरमितायुषः।।

(A.H.U., 39/15-23)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Haritaki	P.	1000 in number
Amalaki	P.	3000 in number
Bilva	Rt./St.Bk.	480 gms
Shyonaka	Rt./St.Bk.	480 gms
Gambhari	Rt./St.Bk.	480 gms
Shalaparni	Rt./St.Bk.	480 gms
Prishniparni	Rt./St.Bk.	480 gms
Brihati	Pl.	480 gms
Kantakari	Pl.	480 gms
Gokshura	Rt.	480 gms
Bala	Rt.	480 gms
Rakta Punarnava	Rt.	480 gms
Eranda	Rt.	480 gms
Mashaparni	Pl.	480 gms
Mudgaparni	Pl.	480 gms
Shathavari	Rt.	480 gms
Meda	Rt. Tr.	480 gms
Jivanti	Pl.	480 gms
Jivaka	Rt.	480 gms
Risibhaka	Rt. Tr.	480 gms
Shali	Rt.	480 gms
Kasa	Rt.	480 gms
Sara	Rt.	480 gms
Darbha	Rt.	480 gms
Ikshu	Rt.	480 gms
Water for decoction	–	120 L
Reduced to	–	12 L
Tvak	St. Bk.	192 gms
Ela	Sd.	192 gms
Musta	Rz.	192 gms
Haridra	Rz.	192 gms
Pippali	Fr.	192 gms
Agaru	Ht. Wd.	192 gms
Chandana	Ht. Wd.	192 gms

Drug Name	Part Used	Proportion
Mandukaparni	Pl.	192 gms
Nagakesara	Stmn.	192 gms
Shankhapushpi	Pl.	192 gms
Vacha	Rz.	192 gms
Plava	Rz.	192 gms
Yashti	Rt.	192 gms
Vidanga	Fr.	192 gms
Sitopala	–	48 kg
Ghrita	–	9.219 kg
Taila	Ol.	6.144 kg
Kshudra	–	15.360 kg

Procedure:

1. Take 1000 no. of Haritaki and 3000 no. ripened fresh Amalaki in a piece of cloth.
2. Coarsely powder the ingredients from Bilva to Ikshu and place them in a vessel.
3. Add 120 liters of water to the vessel. Suspend the Haritaki and Amalaki pottali in the vessel and boil the mixture until the water is reduced to one-fourth (12 liters).
4. Remove the Amalaki and Haritaki bundle from the vessel and strain the decoction and keep it separately.
5. Remove the seeds from the boiled Amalaki and Haritaki and make a paste of the pulp.
6. Strain the paste through a piece of cloth or a 40-mesh sieve over a wide-mouthed vessel to remove fibers.
7. Fry the strained pulp with ghrita (ghee) and taila (oil) until the moisture evaporates.
8. Add sugar (Sitopala) to the strained decoction and boil the mixture to the lehya paka stage (semi-solid consistency).
9. Add the fried pulp to the lehya paka and boil the mixture again until well combined.
10. Add the fine powders of ingredients from Tvak to Vidanga to the lehya. Stir well and allow the mixture to cool.
11. Once cooled, add madhu (honey) to the mixture and mix thoroughly.
12. Store in air tight container.

Dose: 12 gms.

Anupana: Water, Milk.

Therapeutic Indications: Tandra, Shrama, Klama, Manodaurbalya, Jara, Valitya, Palitya, Smritibhrama.

PHARMACODYNAMICS

1. Brahma Rasayana is a complex Ayurvedic formulation aimed at rejuvenating the body and mind. Its ingredients are meticulously selected to provide comprehensive benefits.
2. The combination of Haritaki, Amalaki, and other herbs provides a rich source of bioactive compounds, including antioxidants, vitamins, and minerals, which collectively contribute to its rejuvenating effects.
3. Haritaki and Amalaki are potent rasayana (rejuvenative) herbs known for their ability to promote longevity, improve digestion, enhance cognitive function, and strengthen the immune system.
4. The inclusion of various other herbs like Bala, Shatavari, and Jivanti further supports the overall rejuvenating and strengthening effects of Brahma Rasayana.
5. Additionally, spices and aromatic substances like Cinnamon, Cardamom, Turmeric, and Sandalwood add flavor and also possess medicinal properties, contributing to the formulation's efficacy.
6. The formulation aims to address conditions such as fatigue (Shrama), weakness (Klama), mental fatigue (Manodaurbalya), aging-related issues (Jara), hair fall (Palitya), and memory problems (Smritibhrama), among others.

PHARMACOKINETICS

1. Ayurveda traditionally views pharmacokinetics in terms of the process of digestion, absorption, distribution, metabolism, and elimination of herbs within the body.
2. After ingestion, the herbs are digested in the gastrointestinal tract, releasing their active constituents, which are then absorbed into the bloodstream and distributed to various tissues and organs.
3. The decoction of herbs and spices in water followed by reduction concentrates the beneficial compounds, enhancing their bioavailability and efficacy.
4. Lipophilic compounds present in certain herbs may be better absorbed in the presence of fats, which is why Brahma Rasayana is traditionally administered with milk or ghee (clarified butter).
5. The formulation's effects on tissues and organs are gradual and holistic, aiming to restore balance and vitality to the entire body rather than targeting specific symptoms or organs.

RESEARCH UPDATES

Sr.No	Article Name	Author Name	Result
1.	Critical Review of Brahma Rasayana W.S.R. to its Immunomodulatory Activity	Manoj Kumar Dash, Department of Rasashastra and B.K. Government Ayurveda College, Raipur, Chhattisgarh, India	The review investigates Brahma Rasayana's immunomodulatory effects, focusing on its constituent herbs. Through analysis of Ayurvedic texts and online sources, several herbs within Brahma Rasayana exhibit immunomodulatory properties, including antioxidant, anti-stress, anti-inflammatory, anti-bacterial, vaccine adjuvant, and disease immunity effects, thereby enhancing memory and immunity.
2.	A Clinical Study on the Anabolic Potential of Brahma Rasayana in Geriatric Practice	Y.K. Sharma, Post Graduate Department of Kayachikitsa, Rajeev Gandhi Government Post Graduate Ayurvedic College, Paprola-176115, Himanchal Pradesh.	A clinical trial on Brahma Rasayana -1, comprising anabolic herbs like Amalaki and Shatavari, involved 20 volunteers. Administered twice daily with milk for 45 days, significant improvements were noted in objective measures such as body weight and muscle strength, as well as subjective criteria like well-being and sleep quality.
3.	Potential Therapeutic Benefits of Brahma Rasayana in the Management of Tuberculous Cerebrovascular Disease—A Case Report	Mini V.G, Associate Professor, Department of Kayachikitsa, Government Ayurveda College, Thiruvananthapuram, Kerala.	This case study details the treatment of a 29-year-old male with hemiparesis and sensory deficit post-tuberculous meningitis. Treatment included various Ayurvedic therapies such as Dipana-pachana, snehapana, Virechana, Abhyanga, Sveda, Churna pinda sveda, Jambira pinda sveda, Yogavasti, Anuvasana basti, Murdhni taila prayoga, and Marsha nasya, alongside physiotherapy. Upon discharge, Brahmi kalyanaka ghrita and Brahma Rasayana were recommended along with continued physiotherapy.

MULTIPLE CHOICE QUESTIONS

1. **Which of the following is true about nutraceuticals?**
   a. They only provide basic nutritional value.
   b. They combine nutritional and medicinal benefits.
   c. They are always synthetic products.
   d. They are a type of pharmaceutical drug.
2. **What is the role of Pippali and Shunthi in Kushmanda Avaleha?**
   a. They act as sweeteners.
   b. They possess antimicrobial properties.
   c. They have warming properties and stimulate digestion.
   d. They are primarily used for their antioxidant effects.
3. **Which of the following ingredients in Kushmanda Avaleha is known for its antimicrobial properties?**
   a. Kushmanda (Ash Gourd)
   b. Shveta Jiraka (Cumin)
   c. Madhu (Honey)
   d. Tvak (Cinnamon)
4. **What is the therapeutic indication of Kushmanda Avaleha?**
   a. Fever and headache
   b. Cough, dyspnea, and bleeding disorders
   c. Skin infections and rashes
   d. Joint pain and arthritis
5. **Which concept from Ayurveda can be connected to the application of nutraceuticals?**
   a. Panchakarma
   b. Rasa Shastra
   c. Hita, Ahita, Satmya, Asatmya, and Pathyapathya
   d. Shodhana
6. **What is the primary purpose of Preenana Modaka in Ayurvedic treatment?**
   a. To treat joint pain
   b. To pacify Vata and Pitta doshas and nourish malnourished children
   c. To improve skin health
   d. To enhance mental clarity
7. **Which ingredient in Preenana Modaka acts as a sweetening agent and enhances palatability?**
   a. Priyala (Indian Costus)
   b. Yashtimadhu (Licorice)
   c. Sharkara (Sugar)
   d. Lajja (Parched Rice)
8. **What are the properties of Priyala in the formulation of Preenana Modaka?**
   a. Demulcent and expectorant
   b. Carminative and anti-inflammatory
   c. Antimicrobial and binding agent
   d. Source of carbohydrates and energy

9. **Which ingredient in Preenana Modaka is known for its demulcent and expectorant properties, soothing the respiratory tract?**
   a. Priyala (Indian Costus)
   b. Yashtimadhu (Licorice)
   c. Lajja (Parched Rice)
   d. Madhu (Honey)

10. **What is the role of Madhu (Honey) in the preparation of Preenana Modaka?**
   a. It acts as a demulcent and expectorant.
   b. It serves as a source of carbohydrates and energy.
   c. It acts as a binding agent and possesses antimicrobial properties.
   d. It provides a digestive stimulant effect.

11. **Which of the following is the primary therapeutic indication for Chyavanaprasha?**
   a. Joint pain
   b. Respiratory disorders
   c. Skin infections
   d. Digestive problems

12. **What is the role of Amlaka (Emblica officinalis) in Chyavanaprasha?**
   a. Acts as a diuretic
   b. Boosts immunity and improves digestion
   c. Provides sweetness and palatability
   d. Serves as a carrier for active constituents

13. **Which ingredient in Chyavanaprasha serves as a sweetening agent and enhances its palatability?**
   a. Madhu (Honey)
   b. Ghrita (Clarified butter)
   c. Tugakshiri
   d. Bilva

14. **What properties do Tvak (Cinnamon), Ela (Cardamom), Patra (Cinnamomum tamala), and Kesara (Saffron) add to Chyavanaprasha?**
   a. Antimicrobial and binding agent properties
   b. Antioxidant, anti-inflammatory, and digestive stimulant effects
   c. Carminative and anti-inflammatory properties
   d. Diuretic and renal health benefits

15. **How are the active constituents of the herbs in Chyavanaprasha absorbed in the body?**
   a. Through the respiratory tract
   b. Through the skin
   c. In the gastrointestinal tract after ingestion
   d. Through direct injection into the bloodstream

16. **Which of the following is NOT an ingredient used in the preparation of Phala Ghrita?**
   a. Manjistha
   b. Kushtha
   c. Turmeric
   d. Hingu

17. **What is the primary function of Go Ghrita (Cow ghee) in Phala Ghrita?**
   a. Acts as a sweetening agent
   b. Provides a base for lipid-soluble constituents and nourishment
   c. Serves as a diuretic
   d. Acts as an astringent

18. **Which of the following properties do Manjishtha, Kushtha, Tagara, Haritaki, Bibhitaki, and Amalaki share?**
   a. Carminative
   b. Anti-inflammatory
   c. Laxative
   d. Antiseptic

19. **What is the Anupana (vehicle) recommended for Phala Ghrita?**
   a. Milk
   b. Water
   c. Honey
   d. Warm water

20. **Which therapeutic indication is NOT associated with Phala Ghrita?**
   a. Bala Roga
   b. Bala Graha
   c. Digestive issues
   d. Shukra Vikara

21. **Which of the following is the primary ingredient in Saubhagya Shunthipaka?**
   a. Kasheru
   b. Shunthi
   c. Shaileya
   d. Lavanga

22. **What is the recommended Anupana (vehicle) for Saubhagya Shunthipaka?**
   a. Honey
   b. Warm Water
   c. Water or Milk
   d. Ghee

23. **Which of the following is NOT a therapeutic indication for Saubhagya Shunthipaka?**
   a. Agnimandya
   b. Atisara
   c. Shukra Dosha
   d. Sutikaroga

24. **What is the proportion of Lauha Bhasma used in the preparation of Saubhagya Shunthipaka?**
   a. 24 grams
   b. 48 grams
   c. 96 grams
   d. 384 grams

25. **Which of the following properties are shared by Kasheru, Sringataka, Kamala, Musta, and other herbs in this formulation?**
   a. Analgesic and antipyretic
   b. Digestive stimulant and carminative
   c. Sedative and hypnotic
   d. Antiseptic and hemostatic

26. Which of the following herbs is NOT a part of the Triphala combination used in Shatavari Grita?
a. Haritaki
b. Bibhitaki
c. Musta
d. Amalaki

27. What is the therapeutic indication for Shatavari Ghrita?
a. Vatarakta
b. Shukra Dosha
c. Kasa
d. Agnimandya

28. What is the recommended Anupana (vehicle) for Shatavari Grita?
a. Milk
b. Honey
c. Luke Warm Water
d. Ghee

29. Which ingredient in Shatavari Ghrita provides antioxidant properties and supports immune function?
a. Haritaki
b. Nimbu
c. Musta
d. Go Ghrita

30. What is the proportion of Go Ghrita used in the preparation of Shatavari Ghrita?
a. 25 grams
b. 100 grams
c. 600 ml
d. 2400 ml

31. What is the primary therapeutic indication for Arjuna Kshirapaka?
a. Vatarakta
b. Shukra Dosha
c. Hridroga
d. Agnimandya

32. Which part of the Arjuna plant is used in Arjuna Kshirapaka?
a. Leaves
b. Bark
c. Root
d. Fruit

33. How much Go Kshira (cow's milk) is used in the preparation of Arjuna Kshirapaka?
a. 50 ml
b. 100 ml
c. 160 ml
d. 640 ml

34. What is the dose of Arjuna Kshirapaka as per the provided information?
a. 25 ml
b. 50 ml
c. 100 ml
d. 200 ml

35. Which of the following properties is NOT attributed to Arjuna in the context of Arjuna Kshirapaka?
a. Cardioprotective
b. Antioxidant
c. Hypolipidemic
d. Hypoglycemic

36. What is the primary herbal ingredient used in Rasona/ Lashuna Kshira Paka?
a. Haritaki
b. Garlic
c. Musta
d. Arjuna

37. What is the proportion of garlic used in the preparation of Rasona / Lashuna Kshira Paka?
a. 50 gms
b. 100 gms
c. 192 gms
d. 256 gms

38. What is the final volume of the prepared Rasona/ Lashuna Kshira Paka after reduction?
a. 192 ml
b. 384 ml
c. 512 ml
d. 768 ml

39. Which of the following therapeutic indications is NOT mentioned for Rasona / Lashuna Kshira Paka?
a. Hridroga
b. Vatarakta
c. Gulma
d. Gridhrasi

40. What is the dose of Rasona / Lashuna Kshira Paka as per the provided information?
a. 50 ml
b. 75 ml
c. 100 ml
d. 150 ml

41. What is the primary therapeutic indication for Kharjuradi Mantha?
a. Vatarakta
b. Madhatya
c. Hridroga
d. Grahani

42. Which of the following ingredients is NOT used in the preparation of Kharjuradi Mantha?
a. Khajura
b. Dadima
c. Haritaki
d. Phalasha

43. What is the ratio of Jala (water) to the herbal ingredients in Kharjuradi Mantha?
a. 1:1
b. 2:1
c. 3:1
d. 4:1

44. What is the dose of Kharjuradi Mantha according to the provided information?
a. 1 Pala
b. 2 Pala
c. 3 Pala
d. 4 Pala

45. Which ingredient in Kharjuradi Mantha is known for its cooling and calming properties?
a. Imali
b. Dadima
c. Munnaka
d. Changeri

46. What is the primary therapeutic indication for Brahma Rasayana?
a. Hridroga
b. Madhatya
c. Shrama
d. Vatarakta

47. How many Haritaki and Amalaki are used in the preparation of Brahma Rasayana?
a. 500 Haritaki, 1500 Amalaki
b. 1000 Haritaki, 3000 Amalaki
c. 800 Haritaki, 2400 Amalaki

48. What is the total quantity of water used for the decoction in Brahma Rasayana preparation?
a. 60 L
b. 80 L
c. 100 L
d. 120 L

49. Which ingredient in Brahma Rasayana is known for its potent rasayana (rejuvenative) properties?
   a. Haridra
   b. Bala
   c. Haritaki
   d. Nagakesara

50. What is the dose of Brahma Rasayana according to the provided information?
   a. 8 gms
   b. 10 gms
   c. 12 gms
   d. 15 gms

ANSWERS KEYS

1.	b	2.	c	3.	c	4.	b	5.	c
6.	b	7.	c	8.	b	9.	b	10.	c
11.	b	12.	b	13.	a	14.	b	15.	c
16.	c	17.	b	18.	b	19.	d	20.	c
21.	b	22.	c	23.	c	24.	b	25.	b
26.	c	27.	a	28.	c	29.	b	30.	c
31.	c	32.	b	33.	c	34.	b	35.	d
36.	b	37.	c	38.	d	39.	b	40.	c
41.	b	42.	c	43.	d	44.	b	45.	b
46.	c	47.	b	48.	d	49.	c	50.	c

Short Answer Questions (SAQ)

- What are Nutraceuticals and write its importance
- Write the ingridients of Phala Ghrita and its Research Updates.
- Saubhagya Shunthipaka.

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CHAPTER 8

ANUPANA PRAYOGA FOR AUSHADHI KALPA

8.1 Kaishora Guggulu

Reference: Sharngadhara Samhita, Madhyamakhanda

त्रिफलायास्त्रयः प्रस्थाः प्रस्थैका चामृता भवेत्।।
सङ्कुट्य लोहपात्रे तु सार्धद्रोणाम्बुना पचेत्।
जलमर्थभृतं ज्ञात्वा गृह्णीयाद्वस्त्रगालितम्।।
ततः क्वाथे क्षिपेच्छुद्धं गुग्गुलुं प्रस्थसंमितम्।
पुनः पचेदयःपात्रे दर्व्या संघट्टयेन्मुहुः।।
सान्द्रीभूतं च तं ज्ञात्वा गुडपाकसमाकृतिम्।
चूर्णीकृत्य ततस्तत्र द्रव्याणीमानि निक्षिपेत्।।
त्रिफला द्विपला ज्ञेया गुडूची पलिका मता।
षडक्षं त्र्यूषं प्रोक्तं विडङ्गानां पलार्धकम्।।
दन्ती कर्षमिता कार्या त्रिवृत्कर्षमिता स्मृता।
ततः पिण्डीकृतं सर्वं घृतपात्रे विनिक्षिपेत्।।
गुटिकाः शाणमात्रेण युञ्ज्याद्दोषाद्यपेक्षया।
अनुपाने भिषग्दद्यात् कोष्णं नीरं पयोऽथवा।।
मञ्जिष्ठादिशृतं वापि युक्तियुक्तमतः परम्।
जयेत् सर्वाणि कुष्ठानि वातरक्तं त्रिदोषजम्।।
सर्वव्रणानि गुल्मानि प्रमेहपिडिकास्तथा।
प्रमेहोदरमन्दाग्निकासश्वयथुपाण्डुजान्।।
हन्ति सर्वामयान् नित्यमुपयुक्तो रसायनः।
कैशोरकाभिधानोऽयं गुग्लुलुः कान्तिकारकः।।
वासादिना नेत्रगदान् गुल्मादीन् बरुणादिना।
क्वाथेन खदिरस्यापि व्रणकुष्ठानि नाशयेत्।।
अम्लं तीक्ष्णमजीर्णं च व्यवायं श्रममातपम्।
मद्यं रोषं त्यजेत् सम्यग् गुणार्थी पुरसेवकः।।

(Sha. S.M. Kha., 7/72-81)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Haritaki	P.	1 Prastha
Bibhitaki	P.	1 Prastha
Amalaki	P.	1 Prastha
Guduchi	St.	1 Prastha
Water for Decoction	–	6.144 L
Shuddha Guggulu	Exd.	1 Prastha
Triphala	P.	96 gms
Guduchi	St.	48 gms
Trikatu	Rz/ Fr./Fr.	72 gms
Vidanga	Fr.	24 gms
Dantimula	Rt.	12 gms
Nishotha	Rt.	12 gms
Ghrita	-	Q.S

Procedure:

1. Take the required quantity of Triphala (Haritaki, Bibhitaki and Amalaki). Add two times the amount of water to the Triphala and Boil the mixture until it is reduced to half of its original volume.
2. Filter the Triphala Kvatha to remove solid residue.
3. Add the required amount of Shuddha Guggulu to the filtered Triphala Kvatha and Boil the mixture again until it reaches a thick consistency.
4. Add all the remaining drugs to the thickened mixture and mix thoroughly to form a homogeneous mass.
5. Shape the mixture into a large bolus. Smear a clean utensil with ghee to prevent sticking and place the bolus in the greased utensil.
6. Roll the bolus into small, uniform pills.
7. Allow the pills to dry properly and store the dried pills in a sterilized, airtight container.

Dose: 3 gms.

Anupana: Warm Water, Milk, Manjishthadi Kvatha.

Therapeutic Indications: Kushtha Roga, Varna, Vatarakta, Gulma Roga, Prameha, Udara Roga.

PHARMACODYNAMICS

1. Kaishora Guggulu is a traditional Ayurvedic formulation renowned for its anti-inflammatory, detoxifying, and rejuvenating properties.
2. The primary ingredients, Haritaki, Bibhitaki, and Amalaki, collectively known as Triphala, are

potent detoxifiers and antioxidants. They help to eliminate toxins from the body, thereby reducing inflammation and promoting healing.

3. Guduchi (Tinospora cordifolia) is a versatile herb known for its immunomodulatory effects and ability to purify the blood. It supports the body's natural defense mechanisms and aids in combating various skin disorders and inflammatory conditions.
4. Guggulu, the resin from the Commiphora mukul tree, is a key ingredient in many Ayurvedic formulations. It possesses anti-inflammatory and analgesic properties, making it beneficial for conditions like arthritis, gout, and skin disorders.
5. Trikatu, a combination of Ginger, Black Pepper, and Long Pepper, enhances digestion, metabolism, and circulation, thereby aiding in the elimination of toxins and promoting overall health.
6. Vidanga (Embelia ribes) and Nishotha (Operculina turpethum) have anthelmintic properties and help in the elimination of parasites from the body, contributing to the cleansing and detoxifying effects of Kaishora Guggulu.
7. Other herbs like Dantimula (Root of Baliospermum montanum) and Ghrita (Clarified butter) further support the formulation's efficacy in managing various skin disorders, metabolic disorders, and digestive issues.

PHARMACOKINETICS

1. Ayurveda traditionally views pharmacokinetics in terms of the process of digestion, absorption, metabolism, and elimination of herbs within the body.
2. After ingestion, the herbs in Kaishora Guggulu are digested in the gastrointestinal tract, releasing their active constituents.
3. These active compounds are absorbed into the bloodstream and distributed to various tissues and organs, where they exert their therapeutic effects.
4. The elimination of toxins and waste products occurs primarily through the urine, kidneys, and feces.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	An Ayurvedic Polyherbal Formulation Kaishora Guggulu: A Review	Amit lather, University Centre of Excellence in Research, BFUHS, Faridkot, Punjab, India.	The review elucidates the pharmacological potential of Kaishora Guggulu, as well as the individual pharmacological activities of each ingredient utilized in the formulation. This resource aids researchers in delving deeper into the significance of this crucial Ayurvedic formulation.
2.	A comparative study of Kaishora Guggulu and Amrita Guggulu in the Management of Utthana Vatarakta	Anju P., PhD Scholar, Department of Kayachikitsa, Institute for Post Graduate Teaching and Research in Ayurveda, Gujarat Ayurved University, Jamnagar, Gujarat, India	In this single-blind comparative clinical trial, 30 patients aged 16 to 70 with Utthana Vatarakta were randomly divided into two groups. Group A received Tab Kaishora Guggulu, while Group B received Tab Amrita Guggulu, both at 1 g thrice daily. Efficacy was evaluated using subjective and objective parameters, and statistical analysis was performed with the unpaired "t"-test. Notably, 80% of patients had diabetes mellitus, hypertension, or both. Both groups showed significant improvement, indicating comparable efficacy between the two formulations for managing Utthana Vatarakta.
3.	Kaishore Guggulu: A Precious Medicine	Dr. Pramila Ahire MD (Sch) (Chikitsa) (2nd Year), R. A. Podar Medical College (Govt.), Worli, Mumbai-18 MHA	Based on this clinical trial, it can be concluded that Kaishora Guggulu holds significant value as an Ayurvedic medicine for combating skin disorders such as Vicharchika (Eczema), Kilas (Psoriasis), and Dadru (Fungal Infection). Moreover, its immunomodulatory properties contribute to enhancing immunity.
4.	Standardisation of Kaishora Guggulu by HPTLC Method Using E-guggulsteroneas Marker Compound	Birendra Shrivastava, School of Pharmaceutical Sciences, Jaipur National University, Jaipur-302017, Rajasthan, India	Kaishora Guggulu was quantified using an HPTLC method validated according to ICH guidelines, revealing 0.87% content of E-guggulsterone. This method ensures precise quality control testing and is applicable to various guggul-containing formulations due to its simplicity, speed, and cost-effectiveness, making it suitable for routine analysis by manufacturers.

8.2 Yogaraja Guggulu

Reference: Sharngadhara Samhita Madhyamkhanda

नागरं पिप्पलीमूलं पिप्पली चव्यचित्रकौ।।
भृष्टं हिंग्वजमोदा च सर्षपो जीरकद्वयम्।
रेणुकेन्द्रयवाः पाठा विडङ्गं गजपिप्पली।।
कटुकातिविषा भार्ङ्गी वचा मूर्वे त्रिभागतः।
प्रत्येकं शाणिकानि स्युर्द्रव्याणीमानि विंशतिः।।
द्रव्येभ्यः सकलेभ्यश्च त्रिफला द्विगुणा भवेत्।
एभिश्चूर्णीकृतैः सर्वैः समो देयश्च गुग्गुलुः।।
(वङ्गं रौप्यं च नागं च लोहसारं तथाभ्रकम्।
मण्डूरं रससिन्दूरं प्रत्येकं पलसंमितम्।।

गुडपाकसमं कृत्वा द्वैतद् यदद्याथोचितम्।)
एकपिण्डं ततः कृत्वा धारयेद् घृतभाजने।।
गुटिकाः शाणमात्रास्तु कृत्वा ग्राह्या यथोचिताः।
गुग्गुलुर्योगराजोऽयं त्रिदोषघ्नो रसायनः।।
मैथुनाहारपानानां त्यागो नैवात्र विद्यते।
सर्वान् वातामयान्कुष्ठानर्शांसि ग्रहणीगदम्।।
प्रमेहं वातरक्तं च नाभिशूलं भगन्दरम्।
उदावर्तं क्षयं गुल्ममपस्मारमुरोग्रहम्।।
मन्दाग्निं श्वासकासांश्च नाशयेदरुचिं तथा।
रेतोदोषहरः पुंसां रजोदोषहरः स्त्रियाम्।।
पुंसामपत्यजनको वन्ध्यानां गर्मदस्तथा।
रास्नादिक्वाथसंयुक्तो विविधं हन्ति मारुतम्।।
काकोल्यादिशृतात्पित्तं कफमारग्वधादिना।
दार्वीशृतेन मेहांश्च गोमूत्रेण च पाण्डुताम्।।
मेदोवृद्धिं च मधुना कुष्ठं निम्बशृतेन वा।
छिन्नाक्वाथेन वातास्रं शोथं शूलं कणाशृतात्।।
पाटलाक्वाथसहितो विषं मूषकजं जयेत्।
त्रिफलाक्काथसहितो नेत्रार्तिं हन्ति दारुणाम्।।
पुनर्नवादिक्वाथेन हन्यात्सर्वोदराण्यपि।

(Sha. S.M. Kha., 7/56-69)

Ingredients Used

Drug Name	Part Used	Proportion
Shunthi	Rz.	1 Part
Pippali	Fr.	1 Part
Chavya	St.	1 Part
Pippalimula	Rt.	1 Part
Chitraka	Rt.	1 Part
Hingu	Exd.	1 Part
Yavani	Fr.	1 Part
Sarshapa	Sd.	1 Part
Krishna Jiraka	Fr.	1 Part
Shveta Jiraka	Fr.	1 Part
Renuka	Sd.	1 Part
Indrayava	Sd.	1 Part
Patha	Rt.	1 Part
Vidang	Fr.	1 Part
Gajapippali	Rt.	1 Part
Kodha	Rz.	1 Part
Aatisra	Sd.	1 Part
Bharangi	Rt.	1 Part
Vaca	St.	1 Part
Murva	Rt.	1 Part
Triphala	P.	40 Parts
Shuddha Guggulu	Exd.	60 Parts
Vanga Bhasma	–	16 Parts
Chandi Bhasma	–	16 Parts
Naga Bhasma	–	16 Parts
Lauha Bhasma	–	16 Parts
Abhraka Bhasma	–	16 Parts
Mandura Bhasma	–	16 Parts
Rasa Sindura	–	16 Parts

Procedure:

1. Gather all the required dried ingredients for Yogaraja Guggulu except Shuddha Guggulu. Ensure each ingredient is clean and free from impurities.
2. Using a Khalva Yantra or a grinder, grind each ingredient separately into a fine powder.
3. Filter each powdered ingredient through a clean cloth to remove any coarse particles.
4. Combine all the filtered powders together in a clean, dry container. Mix thoroughly to ensure a uniform blend of all ingredients.
5. Filter the compound powder mixture once again through a clean cloth to ensure a fine consistency.
6. Melt the Guggulu by adding water and heating it over a mild flame. Once the Guggulu is melted, remove it from the heat and add all the remaining homogenous churnas.
7. Mixed well untill suitable for tablets form.
8. Allow the pills to dry properly and store the dried pills in a sterilized, airtight container.

Dose: 3 gms.

Anupana: Water, Honey, Go mutra, Triphala Kashaya.

Therapeutic Indications: Vataroga, Kushtha, Vibanda, Prameha, Vatarakta, Gulma, Nabhishula, Bhagandara, Apasmara, Mandagni, Kasa, Aruchi, Kshaya.

Pharmacodynamics

1. Yogaraja Guggulu is a classical Ayurvedic formulation known for its potent anti-inflammatory, analgesic, and rejuvenating properties.
2. The primary ingredients, such as Shunthi (Ginger), Pippali (Long Pepper), Chavya (Java Long Pepper), and Chitraka (Leadwort), possess heating and digestive properties. They help to improve digestion, stimulate metabolism, and alleviate digestive issues such as bloating and abdominal discomfort.
3. Hingu (Asafoetida) and Yavani (Carom seeds) aid in digestion and relieve gas and bloating.
4. Guggulu, the resin from the Commiphora mukula tree, is a key ingredient known for its anti-inflammatory and analgesic properties. It helps to reduce inflammation and pain associated with various musculoskeletal disorders.
5. Triphala, a combination of three fruits (Haritaki, Bibhitaki, and Amalaki), aids in detoxification, supports digestive health, and provides antioxidant protection.

6. Other ingredients like Bharngi, Vacha, Murva, and Patha have specific actions on respiratory health, digestive disorders, and inflammation.
7. Minerals like Vanga Bhasma, Chandi Bhasma, Naga Bhasma, Lauha Bhasma, Abhraka Bhasma, and Mandura Bhasma provide essential micronutrients and contribute to the formulation's overall efficacy in various metabolic disorders.

PHARMACOKINETICS

1. The pharmacokinetics of Yogaraja Guggulu are understood within the framework of Ayurvedic principles, focusing on the digestion, absorption, metabolism, and elimination of its active constituents.
2. After ingestion, the herbs are digested in the gastrointestinal tract, releasing their active compounds.
3. These active compounds are absorbed into the bloodstream and distributed to various tissues and organs, where they exert their therapeutic effects.
4. Elimination of waste products occurs primarily through the liver, kidneys, and gastrointestinal tract.
5. The formulation's effects are gradual and holistic, aiming to restore balance to the body's systems rather than providing immediate symptomatic relief.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Standardization of Yogaraja Guggulu—An Ayurvedic Polyherbal Formultion	KR Gopala Simha, Sodhana Trust, Gautam Towers, Sardar Patel Road, Secunderabad-500003, Andhra Pradesh.	The traditional preparation of Yogaraja Guggulu, an Ayurvedic medicine, has been standardized through the integration of modern scientific quality control measures. The outcomes of this standardization process could potentially inform the establishment of new pharmacopoeial standards, aimed at optimizing the efficacy of the medicine.
2.	A Critical Review on Yogaraja Guggulu	Dr. Rohitakumar, PG Scholar, Department of R.S. & B.K. Government Ayurvedic Medical College and Hospital, Ballari, Karanataka, India	Yogaraja Guggulu, utilized for osteoarthritis and other related conditions, comprises 29 ingredients targeting vata accumulation in joints and muscles. This review delves into its therapeutic and pharmacological aspects, offering valuable insights for researchers studying this Ayurvedic remedy.
3.	Evaluation of the Anti-Inflammatory Effect of Yogaraja Guggul: An In Vitro Study	Renuka Munshi, Dept. of Clinical Pharmacology,TN Medical College and BYL Nair CharitableHospital, Mumbai Central, Mumbai, MHA, India	The study evaluated YG's anti-inflammatory effects by testing its inhibition of COX-1 & COX-2 and 5-LOX enzymes in vitro using EIA. YG, at concentrations of 25, 50, and 100 µg/ml, significantly inhibited both COX enzymes at 100 µg/ml, comparable to aspirin. It also dose-dependently inhibited 5-LOX enzyme, with maximum effect at 100 µg/ml, surpassing aspirin. These findings underscore YG's potential as an anti-inflammatory agent and warrant further exploration for treating inflammatory respiratory disorders.
4.	Quality Assessment of Different Variants of Yogaraja Guggulu	A K Meena, National Institute of Ayurvedic Pharmaceutical Research, Patiala-147001, Punjab (India)	Two samples taken for study. Sample 1 had a loss on drying at 105°C of 3.84%w/w, while sample 2 showed 10.76%w/w. Total ash values were 7.02%-w/w, with water soluble ash content at 8.87%w/w. Acid insoluble ash values were 0.987%w/w and 1.09%w/w for samples 1 and 2, respectively. Water soluble extractive values indicated various compounds, including sugar, acids, and inorganic compounds. Alcohol soluble extractive values suggested the presence of polar constituents like phenols, alkaloids, steroids, glycosides, and flavonoids. Additionally, TLC was performed using a methanol extract of YRG.

8.3 Narayana Churna

Reference: Sharngadhara Samhita Madhyamakhanda

चित्रकं त्रिफला व्योषं जीरकं हपुषा वचा।।
यवानी पिप्पलीमूलं शतपुष्पाऽजगन्धिका।
अजमोदा शठी धान्यं विडङ्ग स्थूलजीरकम्।।
हेमाह्वा पौष्करं मूलं क्षारौ लवणपञ्चकम्।
कुष्ठं चेति समांशानि विशालां स्याद् द्विभागिका।।
त्रिवृत् त्रिभागा विज्ञेया दन्त्या भागत्रयं भवेत्।
चतुर्भागा शातला स्यात् सर्वाण्येकत्र चूर्णयेत्।।
पाचनस्नेहनाद्यैश्च स्निग्धकोष्ठस्य रोगिणः।
दद्याच्चूर्णं विरेकाय सर्वरोगप्रणाशनम्।।
हृद्रोगे पाण्डुरोगे च कासे श्वासे भगन्दरे।
मन्देऽग्नौ च ज्वरे कुष्ठे ग्रहण्यां च गलग्रहे।।
दद्याद्युक्तानुपानेन तथाध्माने सुरादिभिः।
गुल्मे बदरनीरेण विभेदे दधिमस्तुना।।
उष्णाम्बुभिरजीर्णे च वृक्षाम्लैः परिकर्तिषु।
उष्ट्रीदुग्धेनोदरेषु तथा तक्रेण वा गवाम्।।
प्रसन्नया वातरोगे दाडिमाम्बुभिरर्शसि।
द्विविधे च विषे दद्याद् घृतेन विषनाशनम्।।
चूर्णं नारायण नाम दुष्टरोगगणापहम्। (Sha. S.M. Kh. 6/83-91)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Chitraka	Rt.	12 gms
Haritaki	P.	12 gms
Bibhitaki	P.	12 gms
Amalaki	P.	12 gms
Shunthi	Rz.	12 gms
Maricha	Fr.	12 gms
Pippali	Fr.	12 gms
Hapusha	Fr.	12 gms
Vacha	Rt.	12 gms
Yavani	Fr.	12 gms
Pippalimula	Rt.	12 gms
Saupha	Sd.	12 gms
Yavani	Fr.	12 gms
Ajamoda	Fr.	12 gms
Kacchura	Dr. Rz.	12 gms
Dhaniya	Fr.	12 gms
Shveta Jiraka	Fr.	12 gms
Vidanga	Fr.	12 gms
Shveta Jiraka	Fr.	12 gms
Pokhara Mula	Rt.	12 gms
Yavakshara	–	12 gms
Sarjikshara	–	12 gms
Saindhava Lavana	–	12 gms
Sauvarchala Lavana	–	12 gms
Vida Lavana	–	12 gms
Samudra Lavana	–	12 gms
Romaka Lavana	–	12 gms
Kushtha	Root	12 gms
Vishala	Fr.	24gms
Nishotha	Rt.	36 gms
Dantimula	Rt.	36 gms
Shatala	Rt.	48gms

Procedure:

1. Gather all the required dried ingredients for Narayana Churna. Ensure each ingredient is clean and free from impurities.
2. Using a Khalva Yantra or a grinder, grind each ingredient separately into a fine powder.
3. Filter each powdered ingredient through a clean cloth to remove any coarse particles.
4. Combine all the filtered powders together in a clean, dry container. Mix thoroughly to ensure a uniform blend of all ingredients.
5. Filter the compound powder mixture once again through a clean cloth to ensure a fine consistency.
6. Store the final compound powder in sterilized, airtight glass containers to preserve its potency and freshness.
7. Label the containers with the name Narayana Churna and the preparation date.

Dose: 2- 4 gms, Virechana- 6 gms.

Anupana: Water.

Therapeutic Indications: Hridroga, Pandu, Jvara, Kushtha, Ajirna, Parikitika, Udarroga, Vibanda, Visha, Dushta Varna.

PHARMACODYNAMICS

1. Narayana Churna is a traditional Ayurvedic formulation with potent therapeutic properties.
2. The combination of herbs in this churna is carefully selected to address a wide range of health issues.
3. Chitraka, Haritaki, Bibhitaki, and Amalaki are well-known for their digestive, detoxifying, and rejuvenating properties. They help in improving digestion, promoting bowel movements, and eliminating toxins from the body.
4. Shunthi, Marich, and Pippali contribute to the formulation's digestive and carminative properties. They help in relieving gas, bloating, and abdominal discomfort.
5. Vacha, Ajamoda, Kachhura, and Dhaniya have anti-inflammatory and digestive properties. They aid in reducing inflammation in the digestive tract and improving overall digestion.
6. The inclusion of various salts (Yavakshara, Sarjikshara, Saindhava Lavana, Sauvarchala Lavana, Vida Lavana, Samudra Lavana, and Romaka Lavana) helps in balancing electrolytes and enhancing digestive function.
7. Herbs like Vishala, Nishotha, Dantimula, and Shatala contribute to detoxification and elimination of toxins from the body.
8. Kushtha root in the formulation is known for its anti-inflammatory and antibacterial properties, making it beneficial for skin disorders and infections.
9. Overall, Narayana Churna acts as a digestive stimulant, detoxifier, and rejuvenator, promoting overall health and well-being.

PHARMACOKINETICS

1. The pharmacokinetics of Narayana Churna are not extensively studied in modern scientific terms but are understood within the context of Ayurvedic principles.
2. After ingestion, the herbs in the churna undergo digestion and absorption in the gastrointestinal tract.

3. The active constituents of the herbs are then distributed to various tissues and organs, where they exert their therapeutic effects.
4. Elimination of waste products occurs primarily through the urinary and gastrointestinal systems.
5. The formulation's effects are gradual and holistic, aiming to restore balance to the body's systems rather than providing immediate symptomatic relief.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Development and Standardization of Narayana Churna—A Polyherbal Ayurvedic Formulation	Anupam K. Mangal	This study establishes pharmacognostical standards, SOP, and analytical profiling for Narayana Churna, an Ayurvedic formulation. It exhibits a grayish-brown color and slightly pungent taste. Microscopic analysis revealed various cellular structures like cork cells, endosperm, stone cells, vessels, trichomes, calcium oxalate crystals, starch grains, and oil globules. A TLC fingerprint was developed, and standardized limits were set for physicochemical parameters, microbial count, aflatoxins, heavy metals, and pesticide residues. This effort serves as a valuable reference for Narayana Churna's identification and standardization.
2.	Clinical Efficacy of Narayan Churna in Alcohol Addiction: A Single-Blinded Randomized Clinical Trial	Sandeep Charak, P.G. Department of Agad Tantra, National Institute of Ayurveda, Jaipur, Rajasthan, India	Clinical studies utilized a single-blinded random control method to compare Narayana Churna's efficacy with Ashtanga Lavana Churna. Both groups received supportive drugs to manage withdrawal effects. Alcohol withdrawal symptoms were assessed using the CIWA-Ar scale. Results showed 13.3% of patients in each group experienced excellent relief, while 26.6% and 13.3% in the control and study groups, respectively, showed moderate relief. Overall, 36.66% of patients were de-addicted, highlighting Ayurvedic science's significant achievement.

8.4 Rasa Sindura

Reference: Rasa Tarangini Hindi commentary of Sri Sadananda Sarma, Chaukhambha Surbharti Prakashan, Murchchhana Vigyaniya Taranga, 6/203-234, PP. 125-127

तोलकाष्टकमितं रसेश्वरं तन्मितञ्च विमलं बलिं हरेत्।
खल्वके खलु विमर्द्य कज्जलीं भावयेदथ वटाङ्कुराम्बुभिः।।
मयीपात्रसमाकारां सुकृष्णां काचकूपीकाम्।
सतूलकुट्टितमृदा लेपयेत् खलु यत्नतः।।
स्थापयेत्कज्जलीं काचकुप्यां ततो यत्नतः पाचयेद्वालुकायन्त्रगाम्।
अग्निवृद्धिक्रमैर्जीर्णगन्धे रसे रोधयेद्युक्तितः काचकूपीमुखम्।।
बालुकायन्त्रके काचकूपीमुखात् रोचनासन्निभो नैति धूमो यदा।
सूतपाकक्रियाज्ञानदक्षैर्बुधैर्वेदितव्य जीर्णगन्धो रसः।।
निवेश्य कुप्यां खटिकाविधानं जलेन सम्पेषितया प्रकामम्।।
प्रलेपयेद्वै गुडचूर्णपिष्ट्या ततः पचेद्यामयुगं रसज्ञः।।
अवबुध्य तदङ्गशीततां खलु बालारुणसूर्यसन्निभम्।
गलदेशविलग्नमुज्ज्वलं रससिन्दूरमिहाहरेद् बुधः।।
गुणः–
प्रमेहकरिकेशरी प्रबलशूलकालानलो
भगन्दरहरः परं खलु महाज्वरेभाङ्कुशः।
समस्तगदतस्करः सकलशोषसंशोषको
रसोऽतुलविलासदो विजयते हि सिन्दूरकः।।
अलं मलयजानिलैः किमिह भेषजानां
कुलैः वृथैव घनशीतलैः सरसचन्दनालेपनैः।
सखे मदनजीवनं रतिविलासलीलागृहं
प्रकामबलकान्तिदं भज रसं ससिन्दूरकम्।।
गुल्मप्लीहहरो रतिप्रियकरो यक्ष्मेभपञ्चाननः
पाण्डुस्थौल्यविधूननो व्रणहरो रौक्ष्याग्निमान्द्यापहः।
कुष्ठव्याधिनिषूदनो रतिकलाप्रौढाङ्गनारञ्जनः
कान्तामस्तकभूषणो रसपतिभूर्यात्सदा श्रेयसे।।
नियमयति रसेश पञ्चवातान्नितान्तं
प्रसरति धमनीनां स्वक्रिया वातसाम्ये।
दृढयति भृशमादौ जालकं नाडिकानां
रमयति च ततोऽसौ मानसं सेवकानाम्।।
बहिर्गमनशीला ये स्वेदविण्मूत्रमारुताः।
निरायासं विनिर्यान्ति रसस्यास्य निषेवणात्।।
पित्तं निःसारयत्येष न रेचयति कर्हिचित्।
न च पित्ताशयं कोष्ठं विक्षोभयति भक्षितः।।
स्फीततां दन्तवेष्टानां मुखपाकं क्षतादिकम्।
लालास्रावं प्रदाहं च न सूते चिरसेवितः।।
विकारानीदृशानन्यान् दारुणान् पारदोत्थितान्।
न जातु प्रकरोत्येष रसः सिन्दूरसंज्ञकः।।
दोषत्रितयमत्यर्थप्रवृद्धं शमयत्यलम्।
प्रकृतिं गमयत्यत्र करणानि विशेषतः।।

(R.T. Murchchhana Vigyaniya Taranga)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Shuddha Parada	–	1 Part
Shuddha Gandhaka	–	1 Parts
Nyagrodha/ Vantankura	Lf. Bd.	Q.S. Bhavana

Procedure:

1. Mix Shuddha Parada and Shuddha Gandhaka in Khalva Yantra to make Kajjali.
2. Apply bhavana with Valankura drava once and dry and powder the mixture.

3. Fill the powdered mixture into a glass bottle (Kachakupi).
4. Cover the bottle with cloth smeared in mud, repeating seven times up to the neck.
5. Place the bottle in a sand bath (Baluka Yantra).
6. Apply slow heat, then moderate, and finally strong heat, gradually increasing the temperature.
7. Close the bottle's mouth with a cork made of chalk or brick once the extra gandhaka burns off and Gandhaka fumes (yellow colour) stop emitting.
8. Seal the joints of the cork and bottle mouth with a paste of molasses and lime powder.
9. Apply strong heat for at least two more hours to allow the prepared compound to sublime and adhere to the neck of the bottle.
10. After cooling, collect the sublimed product (Rasa Sindura) from the neck of the bottle.
11. The product should be red, similar to the rising sun.

Dose: 125 mg.

Anupana: Honey.

Therapeutic Indications: Kaphaja Roga, Balakshaya, Dhatu Kshaya, Hrddaurbalya, Prameha, Shula, Bhagandara, Shotha, Gulma, Rajayakshma, Pandu, Sthulata, Vrana, Mandagni.

PHARMACODYNAMICS

1. Rasa Sindura is a classical Ayurvedic formulation prepared from purified mercury (Shuddha Parada) and purified sulphur (Shuddha Gandhaka).
2. It is traditionally prepared through a series of purification and calcination processes to remove impurities and enhance its therapeutic efficacy.
3. The combination of purified mercury and sulphur is believed to have potent therapeutic properties in Ayurveda.
4. Rasa Sindura is primarily indicated for conditions caused by Kapha dosha imbalance, such as respiratory disorders, digestive issues, and certain skin conditions.
5. It is also used to improve strength (Balakshaya), treat tissue depletion (Dhatu Kshaya), alleviate heart weakness (Hriddaurbalya), manage diabetes (Prameha), relieve pain (Shula), treat anal fistula (Bhagandara), reduce swelling (Shotha), manage abdominal tumors (Gulma), address tuberculosis (Rajayakshma), manage anaemia (Pandu), counter obesity (Sthulata), promote wound healing (Vrana), and improve digestion (Mandagni).
6. Rasa Sindura is believed to work by balancing the Kapha dosha and enhancing the body's natural healing mechanisms.

PHARMACOKINETICS

1. The pharmacokinetics of Rasa Sindura are not extensively studied in modern scientific terms but are understood within the context of Ayurvedic principles.
2. After oral administration, Rasa Sindura undergoes digestion and absorption in the gastrointestinal tract.
3. The purified mercury and sulphur constituents are believed to be absorbed into the bloodstream and distributed to various tissues and organs.
4. Once in the body, Rasa Sindura is thought to exert its therapeutic effects by balancing the doshas, improving cellular metabolism, and enhancing tissue nourishment.
5. The elimination of Rasa Sindura from the body occurs primarily through urine and feces.
6. The dosage of Rasa Sindura is usually low, and it is often administered with honey to enhance its therapeutic efficacy and minimize potential side effects.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	Evaluation of Quality Characteristics of Rasa-sindura : An Ayurvedic Classical Rasa-Aushadhi	Arjun Singh	Equal quantities of purified mercury and sulphur were mixed to form a black powder resembling collyrium. After Bhavana with vatankura svarasa, the mixture was filed in a kancha kupi to obtain Rasa-sindura. Chemical analysis revealed 81.7% mercury and 14.7% sulphur, with minor elements present. Particle size analysis showed microfine particles, and XRD analysis confirmed Rasa-sindura as the tri/hexagonal (α-form) of mercury sulfide. Notably, free sulphur was absent, typical of the Kupi Pakva procedure. These findings establish quality assurance benchmarks and suggest potential pharmacopoeial standards for further research.

Sr.No.	Article Name	Author Name	Result
2.	Review on Rasasindura —A Mercurial preparation of Indian System of Medicine	Rohit A Gokarn, Department of Rasashastra and Bhaishajya Kalpana, IPGT & RA, Gujarat Ayurved University, Jamnagar, Gujarat, India	The review notes the emergence of primitive Kupipakva Rasayana around the 10th century, documented in texts like Rasendra Chudamani and Siddhiprada Hindi commentary by Siddhinandan Mishra, published by Choukhamba Publication, Varanasi, from the 3rd century onwards. Discrepancies exist regarding Gandhaka proportion and Rasasindura preparation duration, ranging from 12 hours to 7 days. Advances in pharmaceutical and analytical techniques have facilitated newer manufacturing methods and Rasasindura characterization. Toxicity studies confirm its safety in therapeutic doses.
3.	Pharmaceutico - Analytical Study of *Samaguna, Dviguna* and *Shadguna Balijarita Rasa Sindura*	P. Hrishikesh Department of Rasashastra and Bhaishajya Kalpana, JSS Ayurveda Medical College, Mysore, Karnataka, India	The study compared Rasa Sindura formulations prepared with different proportions of Gandhaka: Samaguna (RS), Dviguna (2RS), and Shadguna (6RS). XRD and FTIR analyses were conducted. Trituration durations were 70, 40, and 24 hours, while heating durations were 16, 16, and 19 hours, respectively. The average yields of RS, 2RS, and 6RS were 54%, 34.44%, and 11.35%, respectively. XRD showed increased crystallinity, and FTIR revealed decreased unsaturated carbon and exchangeable proton with higher sulphur proportions.
4.	Standardization of Rasasindura	Nitin Mankar, PG Student, Dept. of Rasa Shastra & Bhaishajya Kalpana, Y.M.T. Ayurvedic Medical College, Khraghar Sec. 4, Navi Mumbai, MHA, India	1. Seven matka pad bottles with valuka yantra ensured heat resistance during rasasindura preparation, aided by a sandbath for uniform heating. 2. Shalakasanchalana prevented bottle bursting from gandhaka condensation. 3. ICP-AES analysis indicated 83.23% mercury and 8.44% sulphur, revealing gandhaka sublimation. 4. XRD analysis confirmed HgS with a hexagonal crystal structure. 5. Increasing agni sanskara enhances mercury-sulphur bonding, emphasizing jarana sanskara's importance. 6. Standardizing rasasindur via modern parameters promotes acceptance and dispels negative perceptions about parad-containing medicines.

8.5 Rasa Parpati

Reference: Rasa Tarangini of Sri Sadananda Sarma, Chaukhambha Surbharti Prakashan, Murchchhana Vigyaniya Taranga, 6/144-153, pp. 116-117

नाकुलीबीजरजसा गुञ्जाष्टकमिताशिता।
रसपर्पटिका साज्यमुन्मादमिह नाशयेत्।।
ब्राह्मीरससमायुक्ता गुञ्जाष्टकमिताशिता।
रसपर्पटिका काममपस्मारं निवारयेत्।।
रामठेनार्द्धगुञ्जेन सगुञ्जाष्टकजीरका।
रसपर्पटिका भुक्ता ग्रहणीं हन्ति दारुणाम्।।
व्योषनिम्बुदलोपेता भक्षिता रसपर्पटी।
सप्ताहद्वितयेनैव त्वपस्मारं विनाशयेत्।।
वर्धमानकबीजोत्थतैलेन परिशीलिता।
शूलं, गुग्गुलुना पाण्डुशोफं हन्यात्त पर्पटी।।
धूर्तबीजसमायुक्ता रसपर्पटिकाशिता।
गुञ्जापञ्चकमात्रन्तु हन्त्युन्मादं विशेषतः।।
गोमूत्रेण समायुक्ता रसपर्पटिकाशिता।
मासमात्रप्रयोगेण नाशयेदुदजामयम्।।
निम्बपञ्चकभल्लातबाकुचीभृङ्गसंयुता।
निहन्ति सर्वकुष्ठानि रसपर्यटिकाशिता।।
दशमूलकषायेण शीलिता रसपर्पटी।
विनाशयेद्विशेषेण दारुणं वातिकं ज्वरम्।।
त्र्यूषणक्षोदसंयुक्ता रसपर्पटिकाशिता।
विनिहन्त्यचिरादेव कासं खलु कफोत्थितम्।। (R.T. 6/144-153)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Shuddha Parada	–	1 Part
Shuddha Gandhaka	–	1 Part

Procedure:

1. Prepare Kajjali with purified mercury (parada) and sulphur (gandhaka) in a khalva.
2. Place the mixture in an iron vessel and heat using a Sikata yantra.
3. Make a shallow pit in fresh cow dung and line it with a kadali or eranda leaf.
4. When the Kajjali melts and becomes liquid, pour it onto the leaf.
5. Cover with another leaf and gently press with fresh cow dung.
6. Allow the mixture to cool.
7. Remove and powder the flakes of the medicine.
8. Store in air tight glass container.

Dose: 250 mg. Dose may be increased gradually upto 1125 mg.

Anupana: Milk, Butter milk, Bhrsta Jiraka Churna, Hingu Churna.

Therapeutic Indications: Shula, Grahani, Atisara, Pravahika, Gulma, Shotha, Kamala, Pandu, Jvara,

Amavata, Arsha, Kushtha, Amadosha, Pliha Roga, Jalodhara, Bhasmaka Roga, Amlapitta.

PHARMACODYNAMICS

1. Rasa Parpati is an Ayurvedic herbo-metallic preparation made from purified mercury (Shuddha Parada) and purified sulphur (Shuddha Gandhaka) in equal parts.
2. It is traditionally prepared through a series of purification and calcination processes to remove impurities and enhance its therapeutic efficacy.
3. Rasa Parpati is believed to have potent therapeutic properties due to the synergistic effects of its constituents.
4. The combination of purified mercury and sulphur is thought to balance the doshas, particularly Kapha and Vata, thereby alleviating various health issues.
5. Rasa Parpati is primarily indicated for conditions such as abdominal colic (Shula), malabsorption syndrome (Grahani), diarrhea (Atisara), dysentery (Pravahika), abdominal tumors (Gulma), swelling (Shotha), jaundice (Kamala), anaemia (Pandu), fever (Jvara), rheumatoid arthritis (Amavata), piles (Arsha), skin diseases (Kushtha), metabolic disorders (Amadosha), splenic disorders (Pliha Roga), ascites (Jalodhara), acid reflux (Amlapitta), and various other conditions.
6. Rasa Parpati is believed to exert its therapeutic effects by improving digestion, enhancing metabolism, reducing inflammation, and promoting overall health and well-being.

PHARMACOKINETICS

1. The pharmacokinetics of Rasa Parpati are not extensively studied in modern scientific terms but are understood within the context of Ayurvedic principles.
2. After oral administration, Rasa Parpati undergoes digestion and absorption in the gastrointestinal tract.
3. The purified mercury and sulphur constituents are believed to be absorbed into the bloodstream and distributed to various tissues and organs.
4. Once in the body, Rasa Parpati is thought to exert its therapeutic effects by balancing the doshas and promoting cellular metabolism.
5. The elimination of Rasa Parpati from the body occurs primarily through urine and feces.
6. The dosage of Rasa Parpati is typically low and may be gradually increased under the supervision of an Ayurvedic practitioner.
7. Rasa Parpati is often administered with milk, buttermilk, or specific herbal powders (such as Bhrishta Jiraka Churna and Hingu Churna) to enhance its therapeutic efficacy and minimize potential side effects.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	A Review of Parpati Kalpana W.S.R. To Rasa Parpati	Shefali, MD Scholar, Dept. of Rasa Shastra & Bhaishajya Kalpana, Rajiv Gandhi Govt. P.G. Ayurvedic College, Paprola, H.P., India	This paper outlines Rasa Parpati's preparation method and its therapeutic values across various formulations. Parpati, known for treating Grahani, dissociates at the intestinal level. Though the preparation method remains consistent, ingredient variations lead to diverse therapeutic effects, explored herein.
2.	Analysis of Rasa Parpati through Advanced Analytical Techniques	Ankesh Kumar Agrawal, Ayurveda Medical Officer, Govt. Ayush Wing, Guna (MP)	Results show that both Rasa Parpati samples are organo-metallic compounds with organic matter coating the surface of inorganic matter. They contain mercury, sulphur, and trace elements like magnesium and iron. Mercuric sulfide (HgS) is present in cubic and hexagonal forms, while free sulphur is in the orthorhombic form within their crystal lattice. Analytical tests reveal minimal differences between the two samples' profiles.
3.	Antiulcer Activity of Rasa Parpati Against Pylorus Ligation Induced Gastric Ulcer in Rats	Anuroopa, H.K.	Rasa Parpati reduced ulcer number and index while increasing ulcer inhibition compared to controls. Histological analysis revealed less severe gastric mucosa damage, edema, and leukocyte infiltration in Rasa Parpati-treated rats. Additionally, Rasa Parpati lowered volume, free acidity, and total acidity, raising pH. These findings suggest its significant anti-ulcer effects, likely via cytoprotective actions, reduced gastric secretion, or enhanced gastric mucosa reinforcement, bolstering mucosal defenses.

8.6 Kankayana Vati

Reference: Sharngadhara Samhita, Madhyamakhanda, Chaukhamba Surbharti Prakashan

यवानी जीरकं धान्यं मारचं गिरिकर्णिका।
अजमोदोपकुञ्ची च चतुःशाणाः पृथक् पृथक्।।
हिङ्गु षट्शाणिक कार्यं क्षारौ लवणपञ्चकम्।
त्रिवृच्चाष्टमितैः शाणैः प्रत्येकं कल्पयेत्सुधीः।।

दन्ती शुंठी पौष्करं च विडङ्गं दाडिमं शिवा।
चित्रोऽम्लवेतसः शुण्ठी शाणैः षोडशभिः पृथक्।।
बीजपूररसेनैषां गुटिकां कारयेद् बुधः।
घृतेन पयसा मद्यैरम्लैरुष्णोदकेन वा।।
पिबेत् काङ्कायनप्रोक्तां गुटिकां गुल्मनाशिनीम्।
मद्येन वातिकं गुल्मं गोक्षीरेण च पैत्तिकम्।।
मूत्रेण कफगुल्मं च दशमूलैस्त्रिदोषजम्।
उष्ट्रीदुग्धेन नारीणां रक्तगुल्मं निवारयेत्।।
हृद्रोगं ग्रहणीं शूलं क्रिमीनर्शांसि नाशयेत्।

(Sha. S.M. Kha., 7/50-55)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Yavani	Fr.	6 gms
Shveta Jiraka	Fr.	6 gms
Dhaniya	Fr.	6 gms
Maricha	Fr.	6 gms
Girikarnika (Aprajita)	Rt.	6 gms
Ajamoda	Fr.	6 gms
Krishna Jiraka	Fr.	6 gms
Hingu	Exd.	18 gms
Yavakshara	–	6 gms
Sarjikshara	–	6 gms
Pancha Lavana	–	6 gms
Nishotha	Rt.	6 gms
Danti Mula	Rt.	6 gms
Kachura	–	6 gms
Poshakaramula	Rt.	6 gms
Vaividanga	Fr.	6 gms
Dadima	Fr.	6 gms
Haritaki	P.	6 gms
Chitraka	Rt.	6 gms
Amalavetasa	Fr.	6 gms
Shunthi	Rz.	6 gms
Bijora nimbu svarasa	Fr.	Q.S. For Bhavana

Procedure:

1. Gather all the required dried ingredients for Kankayana Vati. Ensure each ingredient is clean and free from impurities.
2. Using a Khalva Yantra (traditional mortar and pestle) or a grinder, grind each ingredient separately into a fine powder.
3. Filter each powdered ingredient through a clean cloth to remove any coarse particles.
4. Combine all the filtered powders together in a clean, dry container. Mix thoroughly to ensure a uniform blend of all ingredients.
5. Filter the compound powder mixture once again through a clean cloth to ensure a fine consistency.
6. Adding Bijora Nimbu Svarasa as Mardana dravya, until it becomes a concentrated form and suitable for making tablets or pills, then roll it into tablets or pills.
7. Expose the tray to sunlight or under hot air oven for several hours to days until the material is completely dry.
8. Once fully dried, collect the dried material. This final product is called Kankayana Vati.
9. Store Kankayana Vati Rasa in a clean, dry, airtight container to preserve its potency and freshness.

Dose: 3 gms.

Anupana: Milk, Ghrita, Nimbu rasa, Warm Water.

Therapeutic Indications: All types of Gulma Roga, Hridroga, Shula, Krimi, Vibanda.

PHARMACODYNAMICS

1. Danti Mula, Chitraka, and Poshakara Mula possess anthelmintic properties, aiding in the expulsion of intestinal worms (Krimi).
2. Ajamoda, Haritaki, and Amalavetasa are known for their laxative properties, which help in relieving constipation and promoting bowel movements, thus alleviating conditions like Vibanda.
3. Hingu acts as a carminative and digestive stimulant, aiding in the expulsion of gas from the gastrointestinal tract and improving digestion.
4. Nishotha and Vai Vidanga are known for their anti-inflammatory and anti-flatulent properties, further contributing to the relief of abdominal discomfort associated with various digestive disorders.
5. The formulation is designed to balance the doshas, particularly Vata and Kapha, thereby addressing a wide range of digestive issues, including Gulma Roga (abdominal tumors or masses), Hridroga (heart diseases), Shula (abdominal colic), and Vibanda (constipation).

PHARMACOKINETICS

1. The pharmacokinetics of Kankayana Vati are not extensively studied in modern scientific terms but are understood within the framework of Ayurvedic principles.
2. After oral administration, the herbal ingredients of Kankayana Vati undergo digestion and metabolism in the gastrointestinal tract.
3. The active constituents of the herbs are absorbed into the bloodstream and distributed to various tissues and organs, where they exert their therapeutic effects.

4. The salts present in the formulation, such as Yavakshara, Sarjikshara, and Pancha Lavana, aid in improving digestion and regulating bowel movements by stimulating digestive secretions and promoting peristalsis.
5. The formulation's herbal ingredients act synergistically to enhance gastrointestinal motility, relieve abdominal discomfort, and improve overall digestive function.
6. The dosage of Kankayana Vati is typically low, and it is often administered with milk, ghee, lemon juice, or warm water to enhance its therapeutic efficacy and minimize potential side effects.

RESEARCH UPDATES

Sr.No.	Article Name	Author Name	Result
1.	A case Report on the Clinical Efficacy of Kankayana Vati and Pilovosointment, A Novel Topical Agent, in the Management of Second-Degree hemorrhoids	A. Ashi, Scientist, Vaidyartanam Ayurveda Research Institute.	The combined use of Kankayana Vati and Pilovos ointment shows promising outcomes in managing second-degree hemorrhoids. This integrated approach effectively relieves symptoms and brings significant improvements in patients' conditions. This case study underscores the significance of comprehensive treatment strategies for hemorrhoids, targeting both internal and external aspects of the condition.
2.	Standardization of Kankayana Vati: An Ayurvedic Polyherbal Formulation	Vineeta Khanvilkar, Bharati Vidyapeeth's College of Pharmacy, C.B.D. Belapur, Navi Mumbai, (MHA), India	This study aimed to standardize Kankayana Vati, an Ayurvedic formulation for various ailments including piles, bloating, intestinal worms, abdominal lumps, hemorrhoids, and heart diseases. Ferulic acid from Ferula asafoetida and plumbagin from Plumbago zeylanica were identified as key constituents. A rapid and precise HPTLC method was developed for standardization, using TLC plates coated with silica gel 60 F254 and a mobile phase of Toluene: Ethyl acetate: Formic acid (6.5:3.5:0.1 v/v/v). Densitometric analysis at 281 nm revealed ferulic acid content (0.32±0.03) and plumbagin content (0.73±0.03). Validation followed ICH guidelines.
3.	A Clinical Study of Kankayana Vati in the Management of Arshas (Piles)	Kanchan M. Borkar, International Journal of Ayurvedic Medicine.	The study aimed to assess Kankayana Vati's efficacy in treating piles in 40 patients. They took 2 gm capsules daily with butter milk for 21 days. Diagnosis involved inspection, per-rectal examination, and proctoscopy. Symptoms were subjectively assessed, showing significant relief with Kankayan Vati, highlighting its effectiveness in managing arsha.

MULTIPLE CHOICE QUESTIONS

1. **Which herb is NOT a part of the primary ingredients of Kaishora Guggulu?**
   a. Haritaki
   b. Bibhitaki
   c. Guduchi
   d. Vidanga
2. **What is the primary pharmacodynamic property of Guggulu in Kaishora Guggulu?**
   a. Immunomodulation
   b. Detoxification
   c. Antioxidation
   d. Anti-inflammatory
3. **Which of the following is NOT a therapeutic indication of Kaishora Guggulu?**
   a. Kushtha Roga
   b. Vatarakta
   c. Asthma
   d. Gulma Roga
4. **Trikatu, an ingredient in Kaishora Guggulu, consists of which combination of spices?**
   a. Turmeric, Cumin, Coriander
   b. Ginger, Black Pepper, Long Pepper
   c. Cinnamon, Cardamom, Clove
   d. Fenugreek, Fennel, Mustard
5. **How is Kaishora Guggulu traditionally administered?**
   a. With cold water
   b. With honey
   c. With grape juice
   d. With warm water, milk, or Manjishthaadhi Kvatha
6. **Which of the following is NOT a primary ingredient of Yogaraja Guggulu?**
   a. Shunthi
   b. Pippali
   c. Guduchi
   d. Chitraka
7. **What is the primary pharmacodynamic property of Guggulu in Yogaraja Guggulu?**
   a. Immunomodulation
   b. Antioxidation
   c. Detoxification
   d. Anti-inflammatory

8. **Which mineral is NOT included in the formulation of Yogaraja Guggulu?**
   a. Vanga Bhasma
   b. Chandi Bhasma
   c. Mandura Bhasma
   d. Arjuna Bhasma

9. **What is the traditional dose of Yogaraja Guggulu?**
   a. 1 gms
   b. 3 gms
   c. 5 gms
   d. 10 gms

10. **What is the recommended anupana (vehicle) for administering Yogaraja Guggulu?**
    a. Milk
    b. Triphala Kashaya
    c. Grape Juice
    d. Lemon Water

11. **Which of the following herbs is NOT included in Narayana Churna?**
    a. Shunthi
    b. Tulasi
    c. Pippali
    d. Chitraka

12. **What is the primary therapeutic indication of Narayana Churna?**
    a. Cardiovascular disorders
    b. Respiratory infections
    c. Digestive issues
    d. Musculoskeletal pain

13. **How much quantity of Narayana Churna is recommended for Virechana (therapeutic purgation)?**
    a. 1-2 gms
    b. 3-5 gms
    c. 6-8 gms
    d. 10-12 gms

14. **Which of the following salts is NOT included in Narayana Churna?**
    e. Saindhava Lavana
    f. Kala Namaka
    g. Vida Lavana
    h. Samudra Lavana

15. **What is the traditional anupana (vehicle) for administering Narayana Churna?**
    a. Milk
    b. Honey
    c. Water
    d. Lemon Juice

16. **What are the primary constituents of Rasa Sindoor?**
    a. Purified mercury and sulphur
    b. Purified mercury and gold
    c. Purified sulphur and gold
    d. Purified mercury and arsenic

17. **What is the traditional anupana (vehicle) for administering Rasa Sindura?**
    a. Milk
    b. Ghee
    c. Honey
    d. Water

18. **Which dosha imbalance is primarily targeted by Rasa Sindura?**
    a. Vata
    b. Pitta
    c. Kapha
    d. Tridosha

19. **What is the therapeutic indication of Rasa Sindura related to tissue depletion?**
    a. Prameha
    b. Hriddaurbalya
    c. Dhatu Kshaya
    d. Gulma

20. **How is Rasa Sindura eliminated from the body?**
    a. Through respiration
    b. Through sweat glands
    c. Through urine and feces
    d. Through the skin

21. **What are the primary constituents of Rasa Parpati?**
    a. Purified gold and sulphur
    b. Purified mercury and gold
    c. Purified mercury and sulphur
    d. Purified mercury and arsenic

22. **Which dosha imbalance is primarily targeted by Rasa Parpati?**
    a. Pitta
    b. Vata
    c. Kapha
    d. Tridosha

23. **What is the traditional anupana (vehicle) for administering Rasa Parpati?**
    a. Water
    b. Honey
    c. Milk, buttermilk, or specific herbal powders
    d. Ghee

24. **What are the therapeutic indications of Rasa Parpati?**
    a. Musculoskeletal disorders only
    b. Respiratory disorders only
    c. Gastrointestinal disorders, metabolic disorders, and various other conditions
    d. Skin disorders only

25. **How is Rasa Parpati believed to exert its therapeutic effects?**
    a. By balancing only Vata dosha
    b. By promoting inflammation
    c. By enhancing cellular metabolism and balancing the doshas
    d. By suppressing digestion

26. **Which of the following herbs in Kankayana Vati is primarily responsible for its anthelmintic properties?**
    a. Hingu
    b. Chitraka
    c. Danti Mula
    d. Poshakara Mula

27. **What therapeutic indications are addressed by Kankayana Vati?**
    a. Respiratory disorders
    b. Cardiovascular diseases
    c. Digestive disorders
    d. Skin conditions

28. **How does Hingu contribute to the pharmacodynamics of Kankayana Vati?**
    a. By promoting bowel movements
    b. By enhancing digestion
    c. By expelling intestinal worms
    d. By reducing inflammation

29. **What doshas does Kankayana Vati primarily aim to balance?**
    a. Pitta and Kapha
    b. Vata and Pitta
    c. Vata and Kapha
    d. Tridosha

30. **Which of the following is NOT an anupana (vehicle) for administering Kankayana Vati?**
    a. Milk
    b. Ghrita
    c. Nimbu rasa (lemon juice)
    d. Vinegar

Answers Keys

1.	d	2.	d	3.	c	4.	b	5.	d
6.	c	7.	d	8.	d	9.	b	10.	b
11.	b	12.	c	13.	c	14.	b	15.	c
16.	a	17.	c	18.	c	19.	c	20.	c
21.	c	22.	c	23.	c	24.	c	25.	c
26.	c	27.	c	28.	b	29.	c	30.	d

Short Answer Questions (SAQ)

- Write the ingridents of Narayana Churna and its therapeutics uses.
- Write short answer on Kankayana Vati.
- Write short answer on Yogaraja Guggulu.

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CHAPTER 9

AUSHADHI PRAYOGA MARGA

9.1 Mukhya Prayogartha Kalpana

Mukhya prayogartha Kalpana in Ayurveda encompasses specific principles and treatment methodologies for addressing oral diseases. It includes various procedures such as Gandusha, Kavala, and Pratisarana (application of medicinal paste or powder). These practices are deeply rooted in Ayurvedic traditions and are recognized for their preventive and therapeutic benefits.

NEED FOR MUKHYAPRAYOGARTHA KALPANA

1. **Rapid Absorption**: The oral mucosa has a rich vascular supply and lacks a stratum corneum epidermis, offering minimal barriers to drug transport. This results in a rapid increase in blood concentration.
2. **Historical Use**: The oral transmucosal route has been used for many years to treat angina pectoris, providing rapid blood nitrate levels.
3. **Quick Onset**: Medications administered through this route appear in the blood within a minute and usually reach peak blood levels within 10-15 minutes, much faster compared to the oro-gastric route.
4. **Pediatric Advantage**: Pediatric patients often swallow medications administered orally, which can lead to drug breakdown in the gastrointestinal system. Oral transmucosal administration avoids immediate destruction by entero-hepatic circulation and first-pass effects of gastric acid or liver metabolism.
5. **Prolonged Exposure**: For significant drug absorption, the medication needs to remain in contact with the mucosal surface for a prolonged period.
6. **Taste Consideration**: The taste of the medication is a major factor in determining the contact time with the buccal or oral mucosa.
7. **pH Influence**: The ionization of the drug affects absorption. Since saliva typically has a pH of 6.5 to 6.9, absorption is optimized for drugs with a higher pH.
8. **Sustained Release**: Prolonged contact can be achieved by keeping the drug in small portions under the tongue or incorporating it into a sustained-release lozenge.
9. **Optimal Absorption Sites**: Drug absorption from the buccal or oral mucosa is higher than from the tongue and gums.

Major Procedures are:

1. GANDUSHA

Definition:

असञ्ज्ञार्या तु या मात्रा गण्डूषः स प्रकीर्तितः।। (Su.Chi., 40/62)

In Ayurveda, the practice of Gandusha involves filling the mouth with decoctions, juices, various oils, cow's milk, cow urine, kanji (a fermented drink), honey, and warm water. These liquid substances are used in such large quantities that they cannot be swirled or moved around in the mouth (stationary). This practice is specifically referred to as 'Gandusha'.

Procedure: In this practice, a large quantity of oil or medicinal liquid is held in the mouth for a specific duration (usually 10-20 minutes) and then spat out.

Dose:

दद्याद् द्रवेषु चूर्णं च गण्डूषे कोलमात्रकम्। (Sha.S.M.U., 10/5)

For liquid preparations, the powder quantity used is 6 grams.

Types:

चतुर्विधः स्याद् गण्डूषः स्नैहिकः शमनस्तथा।
शोधनो रोपणश्चैव कवलश्चापि तद्विधः।। (Sha.S.M.U., 10/1)

1. Sneha
2. Shamana
3. Shodhana
4. Ropana

Samyaka Gandusha Lakshana:

व्याधेरपचयस्तुष्टिर्वैशद्यं वक्त्रलाघवम्।।
इन्द्रियाणां प्रसादश्च गण्डूषे शुद्धिलक्षणम्।

(Sha. S., U.Kha., 10/20)

1. **Vyadhi Apachaya (Disease Eradication)**: The treatment helps in the elimination of diseases affecting the oral cavity.
2. **Tripti (Satisfaction)**: It provides a sense of satisfaction and contentment in the oral cavity.
3. **Vaktra Vaishadya (Oral Cleanliness)**: It enhances the cleanliness of the mouth.
4. **Vaktra Laghava (Lightness in the Mouth)**: It imparts a feeling of lightness in the mouth.
5. **Indriya Prasadana (Sensory Satisfaction)**: It promotes the well-being of the sensory organs associated with the oral cavity.

Benefits

- **Detoxification of the Mouth**: Helps in detoxifying the oral cavity.
- **Improvement of Oral Hygiene**: Enhances oral hygiene and prevents dental decay.
- **Prevention of Oral Health Issues**: Aids in preventing various oral health problems such as gum inflammation and bad breath.
- **Strengthening of Teeth, Gums, and Jaw**: Strengthens the teeth, gums, and jaw.

2. KAVALA

Definition:

मुखं सञ्चार्यते या तु मात्रा स कवलः स्मृतः। (Su.Chi. 40/62)

In Ayurveda, the practice known as 'Kavala Graha' involves filling the mouth with a sufficient quantity of medicinal decoctions, juices, various oils, co 's milk, cow urine, kanji (a fermented drink), honey, ar warm water. These liquid substances are used in such amounts that they can be easily swirled or moved around within the mouth.

Procedure: In this practice, a small quantity of oil or medicinal liquid is swirled around in the mouth for a few minutes and then spat out.

Dose:

कर्षप्रमाणः कल्कश्च दीयते कवले बुधैः।। (Sha.S.U. 10/5)

Kalka: - 12 gms.

Types:

स्निग्धोष्णैः स्नैहिको वाते, स्वादुशीतैः प्रसादनः।
पित्ते, कटवम्ललवणैः रूक्षोष्णैः शोधनः कफे।।
कषायतिक्तमधुरैः कटूष्णैः रोपणो व्रणे।
चतुर्विधस्य चैवास्य विशेषोऽयं प्रकीर्तितः।। (Su.Chi. 40/59-60)

1. **Snehana**: Vata Doshahara, Snigdha, Ushna, Madhura-Amala- Lavana Rasa Pradhana.
2. **Prasadana**: Pitta Doshahara, Shita, Madhura- Tikta Rasa Pradhana.
3. **Shodhana**: Kapha Doshahara, Ushna, Ruksha, Amla Rasa Pradhana.
4. **Ropana**: Varna prashasta, Kashaya- Tikta- Madhura- Katu Rasa.

Benefits:

Similar to Gandusha, Kavala Graha helps in maintaining oral hygiene, preventing dental decay, and managing oral infections. Additionally, it is more suitable and convenient for daily use.

मुखपाके सिराकर्म शिरःकायविरेचनम्।
मूत्रतैलघृतक्षौद्रक्षीरैश्च कवलग्रहः।। (Cha.Chi., 26/204)

Maharshi Charaka has stated that in cases of Mukhapaka (oral ulcers or inflammation of the mouth), one should practice procedures such as Sirakarma (blood-letting), Shirovirechana (nasal purgation), Kaya-virechana (body purgation), and use Kavala (gargling) with substances like urine, oil, ghee, honey, and milk.

POINT TO BE NOTE

असञ्चारी मुखे पूर्णो गण्डूषः कवलश्चरः।
तत्र द्रवेण गण्डूषः कल्केन कवलः स्मृतः।। (Sha. S.U., 10/4)

Acharya Sharngadhara a has provided a different distinction regarding this topic. He mentioned that Gandusha involves stationary holding of liquid substances in the mouth, while Kavala Graha involves swishing or moving powdered substances around in the mouth. Specifically, Gandusha requires filling the mouth with liquid substances, whereas Kavala Graha involves filling the mouth with powders.

2. According to Acharya Sharngadhara, the procedure involves placing the patient in a comfortable position and gently steaming their forehead, neck, and shoulders to induce mild sweating. Then, the patient is instructed to hold liquid medicinal substances in their mouth until the accumulated phlegm or other doshas are pacified, or until nasal discharge occurs. This process may be repeated 3, 5, or 7 times to alleviate the doshas.

It's important to note that the use of Gandusha and Kavala Graha is prohibited in children under five years of age.

3. PRATISARANA

Definition:

Applying powdered or granular medicines inside the mouth with the tip of the finger, as recommended for Gandusha and Kavala, is termed as "Pratisarana."

Types:

कल्को रसक्रिया क्षौद्रं चूर्ण चेति चतुर्विधम्।
अङ्गुल्यग्रप्रणीतं तु यथास्वं मुखरोगिणम्।।

(Su.Su., 40)

1. Kalka
2. Rasa Kriya
3. Shodra
4. Churna

कल्कोऽवलेहश्चूर्णं च त्रिविधं प्रतिसारणम्।।

(Sha.S.U., 10/17)

1. Kalka
2. Avaleha
3. Churna

Procedure: This includes applying medicinal paste, powder, or liquid directly onto the gums and teeth using a finger or brush.

Benefits: This provides targeted treatment for specific oral conditions such as gum disease, toothache, and mouth ulcers. It enhances localized treatment and provides immediate relief from symptoms.

PREVENTION OF ORAL DISEASES

Incorporating Gandusha and Kavala as part of daily routine can significantly reduce the risk of oral diseases. These practices help maintain oral hygiene, reduce plaque formation, and prevent infections of gums and mouth.

THERAPEUTIC BENEFITS

Mukha Prayogartha Kalpana procedures are utilized for treating existing oral conditions, enhancing treatment outcomes, reducing inflammation, and alleviating pain. These procedures assist in managing conditions such as periodontitis, oral ulcers, and halitosis.

INCLUSION IN DAILY ROUTINE

Ayurvedic texts emphasize the importance of integrating these practices into daily routines for overall oral health and well-being. Gandusha and Kavala are considered essential daily practices contributing to oral health and overall wellness.

In Ayurveda, medicinal forms used for oral formulations include:

1. **Vati/Gutika (Tablets):**
   - **Example: Danta Kantivati** – A herbal tablet containing ingredients like neem, cloves, and babula, known for their antimicrobial and anti-inflammatory properties. Used for promoting oral hygiene, preventing dental decay, and freshening breath.
2. **Churna (Powders):**
   - **Example: Triphala Churna** – A blend of three fruits: Amalaki (Emblica officinalis), Bibhitaki (Terminalia bellirica), and Haritaki (Terminalia chebula). Used as tooth powder or mouthwash to cleanse the mouth, support gum health, and alleviate oral issues like bleeding gums.
3. **Asava/Arishta (Liquid formulations):**
   - **Example: Irimedasava** – A liquid herbal preparation containing ingredients like Haritaki (Terminalia chebula), Vidanga (Embelia ribes), and Pippali (Piper longum). Used as a mouth tonic to improve digestion, enhance oral health, and address problems like bad breath.
4. **Kashaya (Decoctions):**
   - **Example: Dashamula Kashaya** – A herbal decoction prepared from a mixture of ten roots, including Bilva (Aegle marmelos), Agnimantha (Premna integrifolia), and Shyonaka (Oroxylum indicum etc.). Used as mouthwash or gargle to reduce inflammation, relieve toothache, and strengthen gums.
5. **Avaleha (Confections/Pastes):**
   - **Example: Khadiradi Avaleha** – A semi-solid herbal preparation containing ingredients like Khadira (Acacia catechu), Lodhra (Symplocos racemosa), and Ela (Elettaria cardamomum). Used for conditions like oral ulcers, bleeding gums, and other oral inflammations.
6. **Khanda (Sugar-based formulations):**
   - **Example: Lavangadi Khanda** – A sugar-based herbal preparation containing ingredients like Lavanga (Syzygium aromaticum), Ela (Elettaria cardamomum), and Tvaka (Cinnamomum verum). Used in the form of lozenges or candies to alleviate throat irritation, freshen breath, and relieve oral discomfort.

In Modern Era:

Toothpaste and mouthwash are essential components of oral hygiene routines.

TOOTHPASTE

1. **Cleaning Agent:** Toothpaste contains abrasives like calcium carbonate or hydrated silica, which help scrub away food Particles and plaque from the teeth and gums.
2. **Fluoride Content:** Most toothpaste formulations include fluoride, a mineral that helps strengthen tooth enamel and prevent tooth decay.

3. **Antibacterial Properties**: Some toothpaste varieties contain antibacterial agents like triclosan or essential oils to help reduce harmful bacteria in the mouth.
4. **Flavoring and Sweeteners**: Toothpaste often includes flavoring agents like mint or fruit extracts to improve taste and encourage regular brushing. Sweeteners may also be added to enhance the overall experience.
5. **Consistency**: Toothpaste comes in various forms such as gel, paste, or powder, catering to individual preferences.

MOUTHWASH

1. **Antiseptic Properties**: Mouthwash typically contains antiseptic ingredients like chlorhexidine or cetylpyridinium chloride, which kill bacteria and reduce plaque formation.
2. **Fresh Breath**: Many people use mouthwash as a quick way to freshen their breath, especially after meals or before social interactions.
3. **Prevention of Gum Disease**: Regular use of mouthwash can help prevent gum disease by reducing the buildup of bacteria along the gum line.
4. **Alcohol Content**: Some mouthwash formulations contain alcohol, which can have a drying effect on the mouth. This may not be suitable for individuals with dry mouth conditions.
5. **Flavoring and Coloring**: Mouthwash often includes flavoring agents like mint or eucalyptus for a refreshing taste. Coloring agents may also be added for aesthetic purposes.

9.2 Nasya Kalpana

Nasya therapy is a therapeutic procedure in Ayurveda where medicinal substances are administered through the nasal passage. It is a part of Panchakarma therapy aimed at balancing the body and mind. Nasya therapy has been practiced since ancient times as a comprehensive approach to promoting health and treating various diseases.

Definition:

औषधमोषसिद्धो वा स्नेहो नासिकाभ्यां दीयत इति नस्यम्।

(Su.Chi. 40/21)

नस्यं तत् कथ्यते धीरैर्नासाग्राह्यं यदौषधम्।
नावनं नस्यकर्मेति तस्य नामद्वयं मतम्।। (Sha. S.U. 8/1)

The term "nasya" is used to refer to those medicinal substances that are administered through the nasal passage. The process related to nasya is called "nasya karma." The herbal formulations used for nasya karma are known as "nasya kalpana" or "nasa kalpa," emphasizing their administration through the nostrils.

Therapeutic effect of medication through nasya karma therapy:

नस्तः कर्म च कुर्वीत शिरोरोगेषु शास्त्रविद्।
द्वारं हि शिरसो नासा तेन तद् व्याप्य हन्ति तान्।। (Cha.Si. 9/88)

Nasya karma is recommended in head disorders according to the scriptures because the nasal passage serves as the gateway to the head. In this way, administering medicine through the nose spreads it into the head and helps in treating the disease.

Nasya therapy is essential because it directly targets the region up to the brain through the nasal passage, which Ayurvedic texts consider as the gateway to the head. The use of Nasya therapy is recommended to deliver medicinal substances directly along this direct pathway, reaching therapeutic agents into the upper body, especially the head and neck areas. It is often recommended for conditions affecting the head, such as sinusitis, headache, migraine, neurological disorders, and disorders of sensitive organs.

Synonyms for Nasya karma include:

- Shiroroga chikitsa
- Shirah shodhana
- Murdha virechana
- Nasa prachardhana
- Navana

Types:

नस्यभेदो द्विधा प्रोक्तो रेचनं स्नेहनं तथा।
रेचनं कर्षणं प्रोक्तं स्नेहनं बृंहणं मतम्।।

(Sha. S.U., 8/2)

2 types:

1. Rechana Nasya
2. Sneha Nasya
   - Rehchana nasya includes Pradhamana nasya and Avpisadan Nasya.
   - Sneha Nasya includes: Marsha and Pratimarsha Nasya.

Nashya Matra:

तस्य प्रमाणमष्टौ बिन्दवः प्रदेशिनीपर्वद्वयनिःसृताः प्रथमा मात्रा, द्वितीया शुक्तिः, तृतीया पाणिशुक्तिः, इत्येतास्तिस्त्रो मात्रा यथाबलं प्रयोज्याः।।

(Su.Chi., 40/28)

1. Prathama Matra: – 8 Bindu
2. Shukti Matra: – 32 Bindu
3. Paani Shukti Matra: – 64 Bindu

These three measures should be taken as per the capacity. The patient should not swallow Snehana Nasya because

it can make the throat sticky and may enter the mouth. To avoid discomfort, it should be spit out.

BENEFITS

1. **Clears nasal congestion:** Removes mucus, toxins, and provides relief from sinus issues.
2. **Improves respiratory health:** Strengthens the respiratory system, reduces swelling.
3. **Enhances mental clarity:** Balances doshas, enhances cognitive function.
4. **Provides relief from headaches and migraines:** Reduces pain, calms the nervous system.
5. **Supports sinus health:** Promotes drainage, prevents infections.
6. **Detoxification and rejuvenation:** Eliminates toxins, revitalizes the body.

Pashyat Karma :

स्नेहनस्यं नोपगिलेत् कथंचिदपि बुद्धिमान्।।
शृंगाटकमभिप्लाव्य निरेति वदनाद्यथा।
कफोत्क्लेशभयाच्चैनं निष्ठीवेदविधारयन्।।

(Su.S.Chi., 40/29-30)

1. Perform steam inhalation for throat and head.
2. Avoid smoking.
3. Follow a non-irritating diet and lifestyle.
4. Avoid excessive exposure to smoke, oily substances, and heat.
5. Avoid alcohol and excessive fluid intake.
6. Refrain from excessive head baths, overeating, anger, etc.

Samyaka Yoga Lakshana:

लाघवं शिरसो योगे सुखस्वप्नप्रबोधनम्।
विकारोपशमः शुद्धिरिन्द्रियाणां मनः सुखम्।।

(Su.Chi., 40/33)

1. शिरसो लाघवं – Lightness of the head.
2. सुख स्वप्न प्रबोधनम् – Comfortable sleep and awakening.
3. विकारोपशमः – Alleviation of disorders.
4. इंद्रियाणां शुद्धि – Purity of senses.
5. मनः सुखम् – Mental happiness.

Atiyoga Lakshana of Nasya Karma:

कफप्रसेकः शिरसो गुरुतेन्द्रियविभ्रमः।
लक्षणं मूर्ध्नितिस्निग्धे रूक्षं तत्रावचारयेत्।।

(Su.Chi., 40/34)

1. कफ प्रसेकः – Phlegm secretion.
2. शिरसो गुरुता – Heaviness of the head.
3. इंद्रिय विभ्रमः – Disturbance of the senses.

AYURVEDIC FORMULATIONS USED FOR NASAL THERAPY (NASYA KARMA)

1. **Powders (Churna):**
   - **Example: Brahmi Churna** – Brahmi powder is prepared by mixing it with a suitable liquid medium to form a paste or suspension for nasal administration. It is used to enhance cognitive function, promote mental clarity, and reduce stress.
2. **Oils (Taila):**
   - **Example: Anu Taila** – Anu Taila is an herbal oil preparation containing specific herbs like Tila Taila (Sesame oil), Brahmi (Bacopa monnieri), Shankhapushpi (Convolvulus pluricaulis), and Yashtimadhu (Glycyrrhiza glabra). Anu Taila is commonly used in Nasya Karma to support sinus health, reduce nasal congestion, and improve mental well-being.
3. **Juices (Svarasa):**
   - **Example: Arka Svarasa** – Arka is a type of juice obtained by extracting fresh parts of plants. For Nasya Karma, Arka Svarasa prepared from herbs like Tulasi (Ocimum sanctum), Adraka (Zingiber officinale), or Neem (Azadirachta indica) can be used. Arka Svarasa is beneficial for clearing nasal passages, reducing inflammation, and enhancing immune functions.
4. **Distillates (Arka):**
   - **Example: Ajavaina Arka** – Arka is a distillate obtained through the distillation process. Ajavaina Arka, derived from Ajavaina seeds (Trachyspermum ammi), is commonly used in Nasya Karma. It helps in relieving nasal congestion, promoting sinus drainage, and alleviating respiratory issues when administered through the nasal route.

9.3 Karna Kalpana

Karna Kalpana is an important Ayurvedic therapeutic method focused on the health and treatment of ear disorders. It is an ancient practice aimed at diagnosing and treating ear-related ailments. Various medicinal substances are used in Karna Kalpana, specially prepared and administered into the ears. The primary objectives of this method are to improve the structure and function of the ears, prevent infections, and enhance hearing ability.

Karna Kalpana predominantly utilizes medicated oils or ghee, prepared through specific processes. It encompasses several techniques such as Karna purna (oil filling), Karna prakshalana (ear cleaning), and

Karna dhupana (ear fumigation). The selection of these techniques depends on the nature and severity of the ear condition. According to Ayurveda, Karna Kalpana not only benefits local ear diseases but also has a positive impact on other parts of the body by maintaining the balance of Tridoshas (Vata, Pitta, Kapha).

This method is used to treat various ear disorders such as Karna shula (ear pain), Karna naada (sounds in the ear), Badhirata (deafness), and Karna srava (ear discharge). Karna Kalpana not only aids in the treatment of diseases, but also plays a crucial role in maintaining ear health and preventing future ailments. The medicines used in Karna Kalpana include various herbs and mineral substances such as Bilva, Licorice, Triphala, Shankha Bhasma, and various types of oils like sesame oil and mustard oil, chosen based on the patient's constitution and the condition of the disease.

The process of Karna Kalpana requires caution and skill and should only be performed by trained Ayurvedic practitioners. During this therapy, the patient is seated in a specific posture, and the medicine is carefully administered into the ear. In conclusion, Karna Kalpana is an extremely significant and effective Ayurvedic therapeutic method for the health and treatment of ear disorders, harmoniously blending ancient wisdom with modern medical science, remaining as relevant today as it was centuries ago.

Need for Karnakalpana

Ears play a crucial role in our sensitive perception and balance, essential for overall well-being. To alleviate various ear conditions such as infections, earwax buildup, swelling, itching, and reduced hearing ability, Karna kalpana becomes necessary. By directly delivering medicinal compounds into the ears, Karnakalpana provides targeted relief and supports the natural healing processes of ear structures.

Benefits of Karnakalpana

- Reduces pain, swelling, and discharge with its anti-inflammatory and anti-microbial properties.
- Softens and dissolves earwax, making it easier to remove and improving ear cleanliness.
- Manages conditions like Otitis externa by reducing swelling and discomfort.
- Alleviates itching, burning sensation, and dryness in the ears.
- Enhances hearing ability.
- Supports overall ear health by treating specific conditions, promoting ear cleanliness, and preventing future issues.

Dosage Forms in Ayurveda

1. **Taila:**
   - **Example: Mullein Oil (Verbascum thapsus)** – Mullein oil is commonly used in ear oiling for its soothing and anti-inflammatory properties. It helps alleviate ear pain, swelling, and discomfort associated with various ear conditions.
2. **Ghrita:**
   - **Example: Bilva Ghrita** – Bilva Ghrita is prepared from the leaves of Aegle marmelos and medicinal ghee. It is used in ear oiling to treat ear infections, reduce swelling, and promote the treatment of ear canal. Bilva Ghrita also helps in soothing ear pain and discomfort.

9.4 Akshi Kalpana

Akshi Kalpana is a therapeutic procedure in Ayurveda aimed at enhancing eye health, treating eye-related diseases, and maintaining optimal vision function. It involves the preparation and use of various herbal substances in different forms to support overall eye care. Akshi Kalpana is rooted in ancient Ayurvedic principles and is considered an integral part of comprehensive eye care.

सेकं आश्च्योतनं पिण्डी विडालस्तर्पणं तथा।
पुटपाकोऽञ्जनं चैभिः कल्पैर्नेत्रमुपाचरेत्।। (Sha. S.U. 13/1)

1. सेक
2. आश्च्योतन
3. पिण्डी
4. विडालक
5. तर्पण
6. पुटपाक

❖ **According to Acharya Sushruta:**

तर्पणं पुटपाकश्च सेक आश्च्योतनाञ्जने।
तत्र तत्रोपदिष्टानि तेषां व्यासं निबोध मे।। (Su.U. 18/4)

❖ **Samaavastha Hetu Kriya Kalpa:** Ashchyotana, Pindi, Seka and Vidalaka.

❖ **Pakvaavstha Hetu Kriya Kalpa:** Tarpana, Anjana and Putapaka.

Need for Akshi Kalpana

Eyes are crucial sensory organs responsible for vision and experiencing the world around us. However, prolonged screen exposure, environmental pollutants, stress, and age-related changes can lead to discomfort, strain, and vision problems. To alleviate these issues and maintain eye health and well-being, Akshi Kalpana becomes essential. By using natural and gentle

ingredients, Akshi Kalpana nourishes, protects, and provides therapeutic support to the eyes.

BENEFITS OF AKSHI KALPANA

1. **Reducing Eye Strain**: Akshi Kalpana can help reduce eye strain caused by prolonged screen exposure, reading, or exposure to bright light. Its soothing and cooling properties help relax the eye muscles and alleviate strain.
2. **Improving Vision**: Regular use of Akshi Kalpana nourishes eye tissues, enhances blood circulation, and promotes eye health, thereby supporting sharpness and clarity of vision. Certain components of Akshi Kalpana are known for their vision-enhancing properties.
3. **Relief from Dry Eyes**: Dry eye syndrome is a common condition characterized by inadequate tear production or poor tear quality. Akshi Kalpana's use of moisturizing and lubricating agents helps relieve dryness, irritation, and discomfort in the eyes.
4. **Reducing Eye Inflammation**: Conditions like conjunctivitis (pink eye) or eyelid swelling (blepharitis) can cause redness, swelling, and discomfort in the eyes. Components in Akshi Kalpana with anti-inflammatory properties aid in calming inflammation and enhancing treatment.
5. **Preventing Eye Infections**: Some ingredients used in Akshi Kalpana possess antimicrobial and antibacterial properties, helping protect the eyes from infections and reducing the risk of bacterial or viral eye conditions.
6. **Supporting Overall Eye Health**: Akshi Kalpana not only addresses specific eye issues but also enhances overall eye health and well-being. Regular use of these practices can maintain the integrity of eye structures, protect against age-related changes, and prevent eye diseases.

1. Ashchyotana:

अथाश्च्योतनकं कार्यं निशायां च कथंचन।।
उन्मीलितेऽक्ष्णिदृङ्मध्ये बिन्दुभिर्द्व्यङ्गुलाद्धितम्।

(Sha. S.U., 13/12)

Applying medicinal drops into open eyes from a height of two finger widths is known as Ashchyotana. This should only be done during the daytime and not at night. In cold weather, the medicinal eye drops should be warmed, whereas in hot weather, they should be cooled. These principles apply universally to ensure safe and effective use of medicinal eye drops.

❖ **Ashchyotana Prayoga Kala:**

Ashchyotana should never be performed at night because it is considered inappropriate timing. It should be done at any time during the day or when there is discomfort in the eyes.

अथाश्च्योतनकं कार्यं निशायां न कथंचन। (Sha. S.U. 13/12)

- All types of eye drops should be administered in quantities up to 100 drops only.
- A drop is measured as the time taken to blink, rotate the hand around the knee, or pronounce a long syllable.

Types, Kala, Matra of Ashchyotana

लेखने सप्त चाष्टौ वा बिन्दवः स्नैहिके दश।
आश्च्योतने प्रयोक्तव्या द्वादशैव तु रोपणे।। (Su.U. 18/45)

Sr. No.	Types	Kala	Matra
1.	Snehana	Aprahna Kala	10 drops
2.	Ropana	Madhyahna Kala	12 drops
3.	Lekhana	Puravahna Kala	7 or 8 drops

❖ **Ashchyotana Dravya according to Dosha:**

वाते तिक्तं तथा स्निग्धं पित्ते मधुरशीतलम्।
तिक्तोष्णरूक्षं च कफे क्रमादाश्च्योतनं हितम्।।

(Sha. S.U. 13/15)

Sr. No.	Roga	Dravya
1.	Vataja Netra Roga	Tikta- Snigdha Dravya
2.	Pittaja Netra Roga	Madhura- Shitala Dravya
3.	Kaphaja Netra Roga	Tikta- Ushna- Ruksha Dravya

Examples:

1. **Sarva Abhishyanda Nashaka** : Triphala Svarasa or Kashaya.
2. **Rakta pitta vata janaya netra pida** : Stri Stanya.
3. **Vata rakta janya pida** : Kshira sarpi or Ghrita.

2. Seka

सेकस्तु सूक्ष्मधाराभिः सर्वस्मिन्नयने हितः।
मीलिताक्षस्य मर्त्यस्य प्रदेयश्चतुरङ्गुलात्।।

(Sha. S.U., 13/2)

Injecting a liquid substance into the eyes from a height of four fingers is called Seka in Ayurveda (a fine stream or trickle).

❖ **Types According to Dosha:**

स चापि स्नेहनो वाते रक्ते पित्ते च रोपणः।
लेखनश्च कफे कार्यस्तस्य मात्राऽधुनोच्यते।।

(Sha. S.U., 13/3)

Sr. No	Types	Dosha
1.	Snehana	Vata
2.	Ropana	Pitta, Rakta
3.	Lekhana	Kapha

According to Matra Kala:

षड्वाक्शतैः स्नेहनेषु चतुर्भिश्चैव रोपणे।
वाक्शतैश्च त्रिभिः कार्यः सेको लेखनकर्मणि।।

(Sha. S.U., 13/4)

Sr. No	Types	Matra Kala
1.	Snehana	600
2.	Ropana	400
3.	Lekhana	300

❖ **Prayoga Kala:**

कार्यस्तु दिवसे सेको रात्रौ चात्ययिके गदे।

(Sha. S.U., 13/5)

It should ideally be done during the day time, but in emergency situations, it can also be done at night.

Example:

1. A paste is prepared by mixing powders of lac, honey, manjishtha, lodhra, and pundarika with cold water, filtering it. This mixture is used for Seka and is beneficial in the treatment of bleeding disorders.
2. Sabara and ghee-fried honey, mixed in equal proportions, boiled in goat's milk, prepared as a powder, is used for Seka in the treatment of Pittabhishyanda (bleeding disorders) and inflamma-tory eye diseases.

3. Tarpana

अथ तर्पणकं वच्मि नेत्रतृप्तिकरं परम्। (Sha. S.U. 13/38)

"Tarpana" refers to the Ayurvedic practice of nourishing and satisfying the eyes for their health and well-being.

❖ **Tarpana Yogaya:**

यदूक्षं परिशुष्कं च नेत्रं कुटिलमाविलम्।।
शीर्णपक्ष्मशिरोत्पातकृच्छ्रोन्मीलनसंयुतम्।
तिमिरार्जुनशुक्राद्यैरभिष्यन्दाधिमन्थकैः।।
शुष्काक्षिपाकशोथाभ्यां युक्तं वातविपर्ययैः।
तन्नेत्रं तर्पणे योज्यं नेत्ररोगविशारदैः।।

(Sha. S.U., 13/38-40)

❖ **Procedure:**

वातातपरजोहीने देशे चोत्तानशायिनः।
आधारौ माषचूर्णेन क्लिन्नेन परिमण्डलौ।।
समौ दृढासंबाधौ कर्तव्यौ नेत्रकोशयोः।
पूरयेद् घृतमण्डेन विलीनेन सुखोदकैः।।
अथवा शतधौतेन सर्पिषा क्षीरजेन वा।
निमग्नान्यक्षिपक्ष्माणि यावत्स्युस्तावदेव हि।।
पूरयेन्मीलिते नेत्रे तत उन्मीलयेच्छनैः।

(Sha. S.U., 13/42-45)

The patient is asked to lie straight on a cot in a place free from wind, sunlight, and dust. Around the eyes, a circular wall about an inch high is made using a paste of lentils (masura dala). This wall is filled with lukewarm ghee or clarified butter, which envelops the closed eyelids. Then, the patient is instructed to slowly open their eyes.

❖ **Prayoga Kala and Matra:**

इत्थं प्रतिदिनं वायौ पित्ते त्वेकान्तरं कफे।
स्वस्थे च द्वयन्तरं दद्यादातृप्तेरिति योजयेत्।। (A.H.Su. 24/101)

Sr. No.	Dosha	Kala
1.	Vataja Netra Roga	Daily
2.	Pittaja and Rakhtaja Netra Roga	After 1 day
3.	Kaphaja Netra Roga	After 2 days

एकाहं वा त्र्यहं वाऽपि पञ्चाहं चेष्यते परम्। (Su.U. 18/12)

Tarpana should be performed until satisfaction is achieved, whether it be for one day, three days, five days, or however many days necessary.

धारयेद्वर्त्मरोगेषु वाङ्मात्राणां शतं बुधः।।
स्वच्छे कफे सन्धिरोगे मात्रापञ्चशतं हितम्।
शुक्ले च षट्शतं कृष्ण रोगे सप्तशतं मतम्।।
दृष्टिरोगेष्वष्टशतमधिमन्थे सहस्रकम्।
सहस्रं वातरोगेषु धार्यमेवं हि तर्पणम्।।

(Sha. S.U., 13/45-47)

Sr. No.	Adhishthana Gata Roga	Matra Kala
1.	Vartamgata Roga	100
2.	Sandhigata Roga	500
3.	Shuklagata Roga	600
4.	Krishnagata Roga	700
5.	Drishtigata Roga	800
6.	Adhimantha	1000

According to Matra:

Sr. No	Dosha	Matra Kala
1.	Vataja	1000
2.	Kaphaja	500

❖ **Samyaka Tarpana Lakshana:**

सुखस्वप्नाबोधं त्वं वैशद्यं वर्णपाटवम्।
निवृत्तिर्व्याधिशान्तिश्च क्रियालाघवमेव च।।

(Sha. S.U., 13/50)

It promotes deep sleep, easy awakening, cleanliness and sparkle of the eyes, relief from diseases, and enhances the efficiency of eye functions.

❖ **Aatitarpana Lakshana:**

अथ साश्रु गुरु स्निग्धं नेत्रं स्यादतितर्पितम्। (Sha. S.U., 13/51)

1. Excessive Tears
2. Heaviness (Guru)
3. Restlessness (Snigdha)

❖ **Hina Tarpana Lakshana:**

रूक्षमस्रावि‌लं रुग्णं नेत्रं स्याद्धीनतर्पितम्।।

(Sha. S.U., 13/51)

1. Dry
2. Excessive Tears
3. Aggravating the root cause of the disease.

4. Putapaka

After applying Sneha (Oleation therapy) treatments like Tarpana, the eyes also become relaxed and rejuvenated, similar to how the body feels relaxed and rejuvenated after Sneha therapy. Therefore, after Tarpana treatment, Netra Putapaka should be applied in diseases suitable for Tarpana to support visual function. Netra Putapaka should be used in those diseases when the proper alignment of Tarpana therapy is achieved.

❖ **Procedure:**

द्वौ विल्वमात्रौ मांसस्य पिण्डौ स्निग्धौ सुपेषितौ।
द्रव्याणां विल्वमात्रं तु द्रवाणां कुडवो मतः।।
तदेकस्थं समालोड्य पत्रैः सुपरिवेष्टितम्।
पुटपाकेन तत् पक्त्वा गृह्णीयात्तद्रसं बुधः।।
तर्पणोक्तविधानेन यथावदुपचारयेत्।
दृष्टिमध्ये निषेच्यः स्यान्नित्यमुत्तानशायिनः।।

(Sha. S.U., 13/53-55)

This paste is prepared by mixing 2 parts of boneless meat, 1 part liquid substance, and 1 part fermented liquid substance. It is wrapped in leaves and packed in clay. Exposed to heat, once dried, the clay layer is removed, and juice is extracted from lime. This juice is used for the eyes according to the described "Tarpana Kalpa".

❖ **Types:**

स्नेहनो लेखनश्चैव रोपणश्चेति स त्रिधा।
हितः स्निग्धोऽतिरूक्षस्य स्निग्धस्यापि हि लेखनः।।
दृष्टेर्बलार्थमितरः पित्तासृग्व्रणवातनुत्।

(Sha. S.U., 13/56-56½)

Sr. No.	Types	Uses	Vaka Matra
1.	Snehana	Aati Ruksha Netra	200
2.	Roapana	Drishti bala, Pitta- Rakta Netra Roga	100
3.	Lekhana	Snigdha Netra	300

Parihara Vishaya and Kala

"Double the number of days used for Tarpana and Putapaka, practice Yantrena (appropriate diet and lifestyle), which means consuming Pathya (beneficial foods) and avoiding Apathya (harmful foods). After performing Tarpana on the eyes, avoid looking at objects with intense light like fire, sun, etc., gaze towards the sky, and refrain from looking at shiny objects. Additionally, protect the eyes from wind."

5. Vidalaka

विडालको बहिर्लेपो नेत्रे पक्ष्मविवर्जितः।।
तस्य मात्रा परिज्ञेया मुखलेपविधानवत्।

(Sha. S.U., 13/30)

"Vidalaka is an external paste applied on the eyelids, but not on the eyelashes. The quantity and method of applying Vidalaka are similar to that of applying Mukhalepa (facial paste)."

6. Pindi

पिण्डी कवलिका प्रोक्ता बध्यते पट्टवस्त्रकैः।।
नेत्राभिष्यन्दयोग्या सा व्रणेष्वपि निबध्यते।

(Sha. S.U., 13/21)

"Pindi or Kavalika is a poultice placed on the eyes by wrapping the substance in cloth. It is beneficial for eye injuries and eye ulcers.

Akshi Kalpana – Dosage Forms Used in Ayurveda

(a) Taila:

1. **Chandanadi Taila**: This oil is prepared from sandalwood, vetiver, usheer, and other cooling substances. It is used to reduce eye burning, inflammation, and infections. This oil provides soothing to the eyes and enhances eye vision.
2. **Anjana Taila**: Anjana Taila is specifically formulated for the eyes. It contains ingredients like triphala, yashtimadhu, and other medicinal herbs. This oil is used for eye cleansing, infection control, and vision improvement.
3. **Nilotpalaadi Taila**: Nilotpalaadi Taila is made from blue lotus, vetiver, sandalwood, and other cooling substances. It helps in reducing eye heat, burning sensation, and swelling. It is particularly used in pitta-related eye disorders.
4. **Narayana Taila**: Narayan Taila is a versatile oil used for various types of eye disorders. It strengthens the eye muscles, enhances blood circulation, and improves vision.

(b) Ghrita:

1. **Triphala Ghrita**: Triphala Ghrita is considered highly beneficial for eye health. It is made from triphala (amalaki, haritaki, and bibhitaki) and cow's ghee. It is used to alleviate eye fatigue, dryness, and redness. It also aids in improving vision.
2. **Jivantyadi Ghrita**: This ghee is prepared from jivanti, shatavari, licorice, and other medicinal ingredients. It is used in conditions like dry eyes, eye inflammation (conjunctivitis), and weak eyesight.

3. **Mahatriphaladi Ghrita**: This is a special type of ghee that includes triphala along with many other medicinal herbs. It is used in the treatment of serious eye conditions like cataract (timira), night blindness (rataundhi), and other chronic eye diseases.
4. **Patoladi Ghrita**: Patoladi Ghrita contains patola leaves, neem, turmeric, and other herbs. This ghee is beneficial for eye infections, eye swelling, and pitta-related eye disorders.
5. **Durvaadi Ghrita**: Durvaadi Ghrita is made from durva grass (couch grass), triphala, and other cooling substances. It helps in reducing eye burning, redness, and inflammation, especially useful in eye disorders aggravated by heat.

9.5 Tvak Kalpana

Tvak Kalpana is a specific Ayurvedic medicinal preparation method that focuses on the health and beauty of the skin. It involves the formulation and use of medicinal substances aimed at addressing specific skin concerns and enhancing overall skin health. Tvak Kalpana utilizes Ayurvedic principles to nourish and rejuvenate the skin, providing natural solutions for skin care.

Need for Tvak Kalpana

The skin is the largest organ of the body and plays a crucial role in protecting against environmental stressors, regulating body temperature, and maintaining overall health. However, factors such as pollution, sun exposure, hormonal imbalances, stress, and aging can affect skin health, leading to issues like acne, dryness, pigmentation, wrinkles, and premature aging. Tvak Kalpana becomes essential to address these concerns and restore the skin's natural balance, vitality, and radiance.

Benefits of Tvak Kalpana

1. **Providing Nutrition and Moisture**: Tvak Kalpana formulations are rich in natural ingredients that deeply nourish and hydrate the skin, replenishing moisture and restoring its natural elasticity. These formulations help prevent dryness, itching, and roughness, leaving the skin soft, smooth, and radiant.
2. **Balancing Oil Production**: For individuals with oily or acne-prone skin, Tvak Kalpana formulations help regulate sebum production, reduce excess oiliness, and prevent clogged pores. This helps control acne breakouts, reduce shine, and promote a clearer complexion.
3. **Soothing and Calming**: Tvak Kalpana formulations contain ingredients with soothing and calming properties that help reduce skin irritation, redness, and inflammation. These formulations are beneficial for sensitive skin types and conditions such as eczema, rosacea, and dermatitis.
4. **Brightening and Evening Skin Tone**: Some Tvak Kalpana formulations are crafted with ingredients known for their brightening and skin tone-evening properties. These formulations help reduce the appearance of dark spots, pigmentation, and uneven skin tone, resulting in a brighter and more uniform complexion.
5. **Anti-Aging and Rejuvenation**: Tvak Kalpana formulations contain powerful antioxidants, vitamins, and minerals that help combat free radical damage, oxidative stress, and signs of aging. Regular use of these formulations reduces the appearance of fine lines, wrinkles, and age spots, promoting a youthful and rejuvenated skin.
6. **Promoting Overall Skin Health**: Tvak Kalpana not only addresses specific skin concerns but also enhances overall skin health and vitality. By supporting the skin's natural functions, these formulations help maintain its integrity, resilience, and youthful glow.

In Ayurveda—Dosage Forms Used in Tvak Kalpana

1. Lepa:

❖ **Definition:**

द्रव्यमार्द्रं शिलापिष्टं शुष्कं वा सद्रवं तनु।
देहे प्रलेपनार्थं तल्लेप इत्युच्यते बुधैः।।

(Dravyaguna Vigy.U. Yadavaji)

For external application on the body, fresh (recently extracted-wet) or dry plants should be washed with water and finely ground with liquids such as water on a grinding stone. Dry plants should be pounded in a mortar and pestle and sieved through a cloth to obtain a fine powder. After that, according to the specified liquids (water, juice, decoction, cold infusion, milk, buttermilk, cow urine, kanji, alcohol, and oil, etc.), the plants should be ground into a fine paste on the grinding stone. This mixture, which is similar to a loose paste suitable for application on the body, is called "Lepa Kalka" (paste preparation).

❖ **Synonyms:**

आलेपस्य च नामानि लिप्तो लेपश्च लेपनम्। (Sha. S.U., 11/1)
Aalepan, Lepa, Lepana.

❖ **Classification of Lepa:**

स त्रिविधः– प्रलेपः, प्रदेहः, आलेपश्च।

(Su.Su., 18/6)

Sr. No.	Lepa	Virya	Karma
1.	Pralepa	Shita	Rakta- Pitta Vikriti
2.	Pradeha	Ushna	Kapha and Vata
3.	Aalepa	Anushana Shita	Samanya

लेप की मोटाई:
त्रिप्रमाणश्चतुर्भागत्रिभागाऽर्धाङ्गुलोन्नत: ।

(Sha. S.U., 11/2)

Sr. No.	Lepa	Width
1.	दोषघ्नलेप Doshaghana	One fourth Part of Angula
2.	विषघ्नलेप Vishghana	One third part of Angula
3.	वर्ण्यकरलेप Vranyakar	Half of Angula

Sneha Dravya Matra in Lepa:

षड्भागं पैत्तिके स्नेहं चतुर्भागं तु वातिके।
अष्टभागं तु कफजे स्नेहमात्रां प्रदापयेत्।।

(Su.Su. 18/10)

Sr. No.	Dosha	Sneha Matra
1.	Vataja	One fourth Part of Kalka
2.	Pittaja	One sixth part of Kalka
3.	Kaphaja	One Eight Part of Kalka

PRECAUTIONS FOR THE USE OF LEPA

1. **Do not use old lepa**: The lepa prepared the previous day should not be applied the next day.
2. **Sequential use**: A second lepa should not be applied without removing the first one. The lepa once applied and removed should not be reused.
3. **Layers and drying**: Depending on the purpose, another lepa should be applied before the first one dries, or it should be allowed to remain on even after drying. In disorders related to blood and bile and in wound inflammation, the lepa should be removed before it dries and a fresh lepa should be applied.
4. **Injury and pain**: In cases of injury and vata-related pain, the applied lepa should be allowed to remain even after it dries.
5. **Avoid lepa at night**: Lepa should not be applied at night because its cooling effect prevents the release of retained heat in the area, which can worsen the disorder or lead to other diseases.
6. **Thickness of lepa**: According to Maharshi Sushruta, the thickness of the lepa should be equivalent to the thickness of buffalo leather.

Example

1. **Chandanadi Lepa**: A paste made from sandalwood and other ingredients such as turmeric, neem, and manjishtha. Chandanadi Lepa is used for its cooling and soothing properties to alleviate skin irritation, inflammation, and acne.
2. **Kumkumadi Pralepa**: A cream formulation containing Kumkumadi oil (an oil preparation) with saffron and other skin-nourishing ingredients. Kumkumadi Pralepa is renowned for its ability to brighten the skin, reduce pigmentation, and promote a radiant glow.
3. **Jatyadi Alepa**: An ointment made from Jatyadi oil (a medicinal oil) and other ingredients such as jatamansi and manjishtha. Jatyadi Alepa is used for its antibacterial and wound-healing properties to treat wounds, cuts, burns, and skin infections.
4. **Yashtimadhu Pradeha**: A powder made from the root of Yashtimadhu (licorice) mixed with honey or ghee. Yashtimadhu Pradeha is applied externally to soothe skin inflammation, reduce redness, and promote healing in conditions such as eczema and psoriasis.

2. MALAHARA

❖ **Introduction:**

The concept of Malahara Kalpana was first mentioned in Ayurvedic pharmacology by Yogaratnakara. The Sanskrit word 'Malahara' signifies the removal of debris, waste products, and dead tissue from wounds, making the term Malahara more appropriate and specific. In modern pharmacology, it is very similar to ointment.

❖ **Method:**

1. Take the base ingredients for the Malahara (such as oil, ghee, wax, vaseline, gandhak, etc.) in the specified quantities.
2. Heat the oils and other base ingredients in a stainless steel pot.
3. After melting, strain the mixture through a fine cloth.
4. Add the prescribed powders such as camphor, tuttha (copper sulfate), sulphur, sindura (vermilion), manyal, alum, etc., and mix thoroughly with a spatula.
5. Strain the mixture again through a cloth and store it in a glass container in a cool place.
6. Apply to wounds as needed.

Uses

- Vrana Shodhana
- Vrana Ropana
- Vidradhi
- Arsha
- Tvak Vikara
- Shira shula
- Kati Shula

NOTE : Malahara Kalpana is an important component of Ayurvedic medicine, used in the treatment of various types of wounds and pain.

Example: Shalmali Malahara – Shalmali bark powder mixed with water or herbal decoctions. Shalmali Malahara is applied locally to reduce swelling, soothe skin irritation, and promote wound healing.

3. UPANAHA

Upanaha is an important external application in traditional medical systems, known in the Greek system as a poultice. Detailed descriptions of Upanaha are available in Sushruta Samhita under the context of sudation therapy.

Ingredients

- **Base Ingredients:** Sesame oil, ghee, radish, carom seeds, castor leaves, mustard seeds, ginger.
- **Active Ingredients:** Turmeric, garlic, neem leaves, rock salt, jaggery, lime.

These ingredients are used in the preparation of Upanaha to aid in therapeutic applications related to sweating therapies.

- **General Method**

1. Gather all the necessary ingredients for Upanaha.
2. Heat sesame oil and ghee.
3. Finely grind all other ingredients and mix them into the warm sesame oil and ghee.
4. Cook this mixture until it becomes thick and ready to be applied as a poultice.
5. Allow it to cool down and store it in a clean container.

- **Application Method**

1. Apply the prepared Upanaha poultice to the affected area.
2. Cover it with a cloth to keep it in place.
3. Leave it on for some time to allow it to penetrate the skin well and exhibit its therapeutic properties.
4. After the specified time period, wash it off with clean water.

- **According to Sushruta Samhita**

1. Apply a tolerably warm poultice prepared from finely powdered herbs combined with a plentiful quantity of salt and sneha (oleaginous substances) in Kanji (fermented gruel). This helps in inducing sweating after applying Upanaha.
2. Bind preparations like Kakolyadi, Eladi, Surasadi Gana, paste of Sesame, Mustard, and Tila, Khichadi, Khira, Lapsi, Veshvara, or Salvana on a clean cloth, apply them on the body, and perform sweating.

उपनाहस्वेदस्तु वातहरमूलकल्कैरम्लपिष्टैर्लवणप्रगाढैः सुस्निग्धैः सुखोष्णैः प्रदिह्य स्वेदयेत्।
एवं काकोल्यादिभिरेलादिभिः सुरसादिभिस्तिलातसी सर्षपकल्कैः कृशरापायसोत्कारिकाभिर्वेशवारैः साल्वणैर्वा तनुवस्त्रावनद्धैः स्वेदयेत्। (Su.Chi. 32/12)

Method:

1. Take equal parts of crushed flaxseed (Alasi/Tisi) powder and barley or wheat flour (atta). Mix it well in water, milk, Kanji (fermented gruel), cow urine, or herbal juices.
2. Add turmeric powder (Haridra) and Dashanga Lepa powder to this mixture along with a little ghee. Cook it over a fire.
3. When it forms a thick paste like lapsi (porridge), spread it thickly on a thick cloth.
4. Place this cloth-covered paste upside down on a larger cloth and apply it hot on the swollen and unripe wounds. This is called Upanaha.
5. In this method, the medicine of hot, cloth-covered paste of Upanaha remains in both types of thick cloth and in the middle.

Useful:

1. Swallowing
2. Pain
3. Joint Pain
4. Injury
5. Gout
6. Skin Diseases.

NOTE : The concept of Upanaha is an effective Ayurvedic treatment method documented in the Sushruta Samhita, which highlights its importance and effectiveness in treating conditions like swelling, pain, and various other ailments. Here's an example:

Example: Eladi Upanaha – Eladi oil (a formulation of oils) combined with substances like cardamom and cinnamon, prepared into medicinal strips. Eladi Upanaha is used for treating skin conditions such as eczema, itching, and allergic reactions by providing local nourishment and support.

This method illustrates how Upanaha utilizes local applications to address specific skin conditions effectively, as described in the Sushruta Samhita.

4. ABHYANAGA

Introduction:

Tvak Abhyanga is indeed a significant Ayurvedic therapy that involves the application of oil through massage on the entire body's skin. It not only enhances physical health, but also helps in balancing Vata dosha

and revitalizing the body. Regular Tvak Abhyanga is believed to promote overall rejuvenation and emotional balance according to Ayurveda.

Ingredients Used:

- Tila Taila
- Ghrita
- Nariyala Taila
- Sarshapa Taila
- Aushadhiya Taila

Procedure:

1. Cleanse the body thoroughly and sit in a comfortable position.
2. Choose an appropriate oil based on the individual's needs and dosha (Vata, Pitta, Kapha).
3. Gently warm the oil to ensure it penetrates the skin effectively.
4. Begin applying the oil on the head and massage gently in circular motions.
5. Use light strokes to massage the oil onto the face and neck.
6. Apply oil all over the body and massage with circular motions. Cover each limb while massaging towards the heart.
7. Allow the oil to remain on the body for some time after the massage, then take a warm shower with mild water.
8. Tvak Abhyanga not only nourishes the skin but also helps in balancing the doshas and promoting overall well-being according to Ayurvedic principles.

Benefits:

1. It nourishes the skin deeply, making it soft and radiant.
2. It enhances blood circulation and improves oxygen supply to the body's tissues.
3. It reduces stress and fatigue, promoting mental peace.
4. It helps balance Vata dosha.
5. It strengthens joints and muscles, improving their flexibility.
6. It enhances the quality of sleep, promoting deep and restful sleep.

Conclusion

Tvak Abhyanga is an ancient Ayurvedic practice that is highly beneficial for both the body and mind. Regular Abhyanga not only improves physical health but also maintains mental and emotional balance. This practice leads individuals towards overall health and well-being.

Example: Bhringaraja Abhyanga – Massage using Bhringaraja oil infused with Bhringaraj and other herbs. Bhringaraja Abhyanga is used to nourish and strengthen the skin, improve blood circulation, and enhance overall skin health.

5. UDVARTHANAM

Introduction:

Udvarthanam is indeed a significant therapy in Ayurveda, involving the application of medicinal powders for massage. It aims to expel toxins, improve blood circulation, and nourish the skin. This therapy is well-documented in ancient Ayurvedic texts and forms an integral part of Panchakarma treatments.

Procedure:

1. Cleanse the body thoroughly before Udvartanam.
2. Choose appropriate medicinal powder based on the individual's needs and dosha (Vata, Pitta, Kapha).
3. Mix the medicinal powder with sesame oil to make a paste. Apply this paste on the body and massage in circular motions, always massaging towards the heart.
4. After the massage, leave the paste on the body for some time and then bathe with warm water.

❖ **Therapeutic use:**

उद्वर्तनं कफहरं मेदसः प्रविलायनम्।
स्थिरीकरणमङ्गानां त्वक्प्रसादकरं परम्।। (A.H.Su. 2/15)

1. Kaphahara
2. Medha Vilayana
3. Sthirikarana
4. Tvaka Prasadana

❖ **Conclusion**

Udvartanam is an effective Ayurvedic procedure that assists in maintaining the health of both body and mind. Its regular use helps to keep the body healthy, clean, and rejuvenated. Ancient Ayurvedic texts provide detailed descriptions of this procedure, which validate its importance and effectiveness.

Example: Triphala Udvartanam involves a mixture made from Triphala (a combination of three fruits: Amla, Bibhitaki, and Haritaki) mixed with chickpea flour or rice flour. Triphala Udvartanam is used to exfoliate the skin, remove dead cells, eliminate toxins, and improve the texture and complexion of the skin.

9.5.A Shirodhara

INTRODUCTION

Shirodhara is a traditional Ayurvedic therapy that involves the continuous pouring of warm, herbal oil or other liquids onto the forehead in a rhythmic and steady stream. Derived from the Sanskrit words "shiro" (head) and "dhara" (flow), this therapeutic technique aims

to balance the mind, body, and spirit by harmonizing the flow of vital energies within the body. Shirodhara is deeply rooted in Ayurvedic principles and has been practiced for thousands of years as a holistic approach to health and well-being.

Need for Shirodhara

In today's fast-paced world, many individuals experience high levels of stress, anxiety, and mental fatigue due to various factors such as work pressure, lifestyle imbalances, and environmental stressors. Shirodhara becomes necessary to address these issues and provide profound relaxation and rejuvenation for the mind and body. By calming the nervous system, reducing stress hormones, and promoting a sense of inner peace, Shirodhara helps individuals cope with the challenges of modern living and restore balance to their lives.

Benefits of Shirodhara

Stress Reduction: Shirodhara is renowned for its ability to reduce stress levels and induce a deep state of relaxation. The continuous flow of warm oil onto the forehead calms the mind, soothes the nervous system, and promotes feelings of tranquility and well-being.

Mental Clarity and Focus: Shirodhara helps clear the mind and enhance mental clarity and focus. By calming the overactive mind and balancing the neurotransmitters in the brain, it improves cognitive function, concentration, and memory.

Improved Sleep Quality: Individuals struggling with insomnia or sleep disturbances can benefit from Shirodhara. The therapy helps regulate the sleep-wake cycle, promote relaxation, and induce restful sleep, leading to improved sleep quality and overall well-being.

Relief from Anxiety and Depression: Shirodhara has a profound effect on mood and emotional balance. It helps alleviate symptoms of anxiety, depression, and mood swings by balancing the production of neurotransmitters like serotonin and dopamine in the brain.

Headache and Migraine Relief: The soothing and calming effect of Shirodhara can help alleviate tension headaches, migraines, and other types of headaches. It relaxes the muscles of the head and neck, relieves tension, and reduces the frequency and severity of headaches.

Detoxification and Rejuvenation: Shirodhara is often used as part of Panchakarma therapy to detoxify and rejuvenate the body. The warm oil penetrates the skin, nourishes the tissues, and eliminates toxins, promoting overall health and vitality.

Shirodhara therapy can be adapted to suit different needs and preferences through various forms:

Taila dhara: In Taila dhara, warm herbal oil is gently poured onto the forehead in a continuous stream. This classic form of Shirodhara is deeply relaxing and nourishing, promoting mental clarity, and calming the nervous system.

Takra dhara: Takradhara involves the continuous pouring of medicated buttermilk (takra) onto the forehead. Takradhara is particularly beneficial for pacifying Pitta dosha, reducing inflammation, and soothing sensitive or irritated skin.

Kshira dhara: Kshiradhara utilizes warm medicated milk as the pouring liquid. The soothing properties of milk help to nourish and moisturize the skin, reduce heat and inflammation, and promote relaxation.

Jala dhara: Jala dhara involves the gentle pouring of lukewarm water onto the forehead. This form of Shirodhara is cooling and refreshing, making it suitable for individuals with excess heat or Pitta imbalances.

Kvatha dhara: Kvatha dhara utilizes herbal decoctions prepared by boiling medicinal herbs in water. The herbal-infused water is poured onto the forehead, delivering the therapeutic benefits of the herbs directly to the nervous system and promoting balance in the body.

9.5.B Abhayanga

Sahacharaadi Taila

Reference: AFI, Part I

समूलशाखस्य सहाचरस्य तुलां समेतां दशमूलतश्च।
पलानि पञ्चाशदभीरुतश्च पादावशेषं विपचेद्वहेऽपाम्।।
तत्र सेव्यनखकुष्ठहिमैलास्पृक्प्रियङ्गुनलिकाम्युशिलाजैः।
लोहितानलदलोहसुराह्वैः कोपनामिशितुरुष्कनतैश्च।।
तुल्यं क्षीरं पालिकैस्तैलपात्रं सिद्धं कृच्छ्रान् शीलितं हन्ति वातान्।
कम्पाक्षेपस्तम्भशोषादियुक्तान् गुल्मोन्मादौ पीनसं योनिरोगान्।।

(A.H. Chi., 21/66-68)

Ingredient Used

Drug Name	Part Used	Proportion
Sahachara	Pl.	4.800 kg
Bilva	Rt./St.Bk	480 gms
Shyonaka	Rt./St.Bk	480 gms
Gambhari	Rt./St.Bk	480 gms
Patala	Rt./St.Bk	480 gms
Agnimantha	Rt./St.Bk	480 gms
Shalaparni	Pl.	480 gms
Prishniparni	Pl.	480 gms
Brihati	Pl.	480 gms

Drug Name	Part Used	Proportion
Kantakari	Pl.	480 gms
Gokshura	Pl.	480 gms
Shatavari	Rt. Tr.	2.400 kg
Water for Decoction	–	49.152 l
Reduced to	–	12.288 l
Ushira	Rt.	48 gms
Vyaghranakha	Fr.	48 gms
Kushtha	Rt.	48 gms
Shveta Chandana	Ht. Wd.	48 gms
Ela	Sd.	48 gms
Sprik	Pl.	48 gms
Priyangu	Fl.	48 gms
Nalika	St. Bk.	48 gms
Hrivera	Rt.	48 gms
Shaileya	Pl.	48 gms
Manjishtha	Rt.	48 gms
Jatamansi	Rt.	48 gms
Agaru	Rt.	48 gms
Devadaru	Ht. Wd.	48 gms
Choraka	Rz.	48 gms
Mishreya	Fr.	48 gms
Turushka	Exd.	48 gms
Tagara	Rt.	48 gms
Go Dugdha	–	3.072 l
Tila Taila	Ol.	3.072 l

Procedure:

1. **Preparation of Kalka Dravya:**
   - Take all the ingredients for Kalka Dravya (Ushira to Tagara) and grind them into a fine powder (Churna).
   - Add a sufficient quantity of water to the powdered herbs to make a thick kalka (bolus form).
2. **Preparation of Drava Dravya:**
   - Prepare the kvatha from Sahachara to Shatavari dravyas as per classical references.
   - Collect the Go-Dugdha as drava dravya.
3. **Mixing:**
   - In a clean vessel, add Tilataila as mention quantity along with Kalka Dravya and Drava Dravya.
4. **Heating:**
   - Place the mixture over a low flame. Stir continuously to prevent the Kalka from sticking to the bottom and ensure even cooking.
   - Maintain a consistent low flame to avoid burning the ingredients. Heat the mixture until the water content evaporates and sneha siddhi lakshanas.
5. **Filtering:**
   - Once the Sneha siddhi lakshana attains, remove it from the heat.
   - Filter the taila through a clean, dry cloth to remove the solid residues of the herbal paste.
6. **Cooling and Storage:**
   - Allow the filtered taila to cool down to room temperature.
   - Store it in a clean, dry, airtight container. Keep the container in a cool, dark place to preserve the potency of the medicated oil or ghee.

Dose: 6 -12 gms, Used externally for abhyanga also.

Anupana: Milk and Warm Water.

Therapeutic Indications: Vata Vyadhi, Kampha, Gulma, Unmada, Pinasa, Yoniroga, Akshepa, Urustambha, Shosha.

PHARMACODYNAMICS

Mechanism of Action:

1. **Anti-inflammatory:** Many ingredients such as Bilva, Gambhari, and Shatavari are known for their anti-inflammatory properties, helping in reducing inflammation associated with Vata Vyadhi (disorders caused by the imbalance of Vata dosha).
2. **Analgesic:** Ingredients like Agnimantha and Gokshura provide pain relief, which is beneficial for conditions like Kampha (tremors) and Urustambha (stiffness of the thighs).
3. **Nervine Tonic:** Herbs like Jatamansi and Shatavari act as nervine tonics, supporting the nervous system, which is crucial for treating conditions like Unmada (psychosis) and Akshepa (convulsions).
4. **Antispasmodic:** Compounds in the formulation exhibit antispasmodic effects, alleviating muscle spasms and cramps.
5. **Rejuvenative:** Shatavari and other rejuvenative herbs help in restoring and maintaining health, addressing Shosha (emaciation) and promoting overall vitality.

PHARMACOKINETICS

Absorption:

- When applied externally, Sahacharadi Taila is absorbed through the skin. The lipophilic nature of sesame oil (Tila Taila) facilitates the absorption of active constituents through the dermal layers.

Distribution:

- Once absorbed, the active compounds are distributed to various tissues. The use of massage (abhyanga) enhances the circulation and distribution of the oil's constituents, ensuring deeper penetration into muscles and joints.

Metabolism:

- The active ingredients are metabolized primarily in the liver. Herbal components are biotransformed into various metabolites, which then exert their therapeutic effects.

Excretion:

- Metabolites of the active compounds are excreted through the kidneys and, to a lesser extent, through bile and sweat.

RESEARCH UPDATES

Sr. No.	Article Name	Author Name	Result
1.	Efficacy of Sahachara Taila Matra Bastiin Themanagement of Sandhigata Vata with Special Refernece to Osteoarthritis	Ravibhushan Sadashiv Sonawane, Associate Professor, SST Ayurvedic College, Sangamner, M.H.A. India	The use of Sahachara Taila Matra Basti significantly reduced Sandhishula by up to 85.84% in Sandhigata Vata, resulting in an overall relief of 87.84% in all symptoms. This treatment demonstrated effective pain relief, inflammation reduction, and nourishing properties without any adverse effects. Additionally, it showed significant improvement in conditions like Atop and Graha, highlighting its potency in managing Sandhigata Vata.
2.	Standardization of Sahacharadi Taila – A Compound Formulation Used in Medicated Enema Therapy	B. A. Lohith, Department of PG studies in Panchakarma, SDM College of Ayurveda & Hospital Tanniruhalla, BM Road, Hassan-573201, Karnataka, India.	Sahacharadi Taila was meticulously prepared using the Snehapaka Vidhi method, combining a liter of Tila Taila and Kvatha in a ratio of 1:4:16. Kalka, consisting of Sahachara, Nagara, and Devadaru, was mixed with the oils and boiled gently for five days. After filtration, detailed analyses were conducted, revealing specific values: refractive index 1.47017, weight per ml 0.916, acid value 14.233, saponification value 228.050, and unsaponifiable matter percentage 1.665.
3.	Clinical Efficacy of Sahacharadl Tail Basti In Management of Pcos – A Case Study	Snehal Akhare, Assistant Professor, Prasutitantra and Striroga, SSVP Ayurveda College, Hatta, Maharashtra.	A 19-year-old female diagnosed with PCOS sought Ayurvedic treatment after allopathic options failed. Following Ayurvedic principles, she received Sahacharadi tail basti for 7 days along with Chandraprabha vati and Aarogyavardhini vati. After two treatment cycles, her menstrual cycles normalized, and after 6 months, all symptoms disappeared with no PCOS detected on scan. The treatment effectively managed PCOS without adverse effects, offering relief during adolescence.
4.	Role of Sahcharadi Taila Matra Basti in Udavarta Yonivyapada	Dr. Rasika Ravikumar Magdum, PG Scholar, Dept. of Panchkarma, LRP Ayurved Medical College Islampur Taluka Walwa Dist, Sangali, Maharashtra.	Basti, endorsed by ancient texts, is key in treating vitiated Vata Dosha and effectively addresses Udavritta Yonivyapada (Dysmenorrhoea). This hints at cost-effective Ayurvedic solutions for this prevalent issue, which can be disruptive and often requires long-term medication. No adverse effects were noted during or after therapy. Further studies are necessary to confirm the efficacy of Ayurvedic formulations, with suggested modifications. Combined therapy showed promising results, highlighting the potential to evaluate Basti's effectiveness using modern parameters.

9.5.c Ashti Bhagna

MURIVENNA TAILA

Reference: The Pharmacopoeia of Government Ayurveda College, Tiruvanthapuram.

INGRIDENTS USED

Drug Name	Part Used	Proportion
Narikela	Ol.	768 ml
Tamula	Lf.	384 gms
Sigru	Lf.	384 gms
Paribhadra	Lf.	384 gms
Kumari	Lf.	384 gms
Karanja	Lf.	384 gms
Buka	Pl.	384 gms
Palandu	Bl.	3.072 l
Tandulambu	Sd.	768 ml
Shatavari	Rt.	144 gms

Procedure:

1. Wash all the herbal ingredients thoroughly and set them aside.
2. Prepare plandu svarasas per classical references.
3. Extract fresh juice from Aloe vera leaves.
4. Prepare the kalka from the Shatavari leaves.
5. Take coconut oil as a snehadravya in a large bottom boiler.

6. Add all the ingredients, swarasa, and the kalka to the coconut oil.
7. Boil the mixture completely with occasional stirring.
8. Continue boiling until sneha siddhi lakshana.
9. Filter the tailaand pour into a glass bottle.
10. Store the bottle in a cool, dry place for future use.

Dose: For External Application.

Therapeutic Indications : Varna, Sandhishotha, Abhighata Sopha, Asthi Bhagna

Pharmacodynamics

- **Anti-inflammatory**: Ingredients like Tamula, Sigru, and Karanja have anti-inflammatory properties, which help reduce swelling and inflammation (Sandhishotha and Abhighata Sopha).
- **Wound Healing**: Kumari (Aloe vera) and Shatavari promote wound healing (Varna) by enhancing tissue repair and regeneration.
- **Analgesic**: The formulation provides pain relief, aiding in conditions like joint swelling and trauma-induced edema (Sandhishotha and Abhighata Sopha).
- **Bone Healing**: The ingredients support bone health and healing, beneficial for bone fractures (Asthi Bhagna).

PHARMACOKINETICS

Absorption:

- Murivenna Taila is applied externally and absorbed through the skin. The coconut oil (Narikela) base facilitates deep penetration of active ingredients.

Distribution:

- After absorption, active compounds are distributed locally at the application site. Massage enhances the distribution, ensuring the oil reaches deeper tissues, including muscles and joints.

Metabolism:

- The active ingredients are metabolized at the local tissue level and, to some extent, systemically in the liver, where they are converted into metabolites that exert therapeutic effects.

Excretion:

- Metabolites are primarily excreted through the kidneys and also through sweat.

RESEARCH UPDATES

Sr. No.	Article Name	Author Name	Result
1.	A Comprehensive Review of Murivenna, an Ayurveda Formulation	Mahesh S., Research Officer, Central Ayurveda Research Institute, CCRAS, Patiala, Punjab, India	Murivenna, an Ayurvedic oil, treats acute injuries like contusions, wounds, and fractures. Originating from Agastyamarma Shastra, it's modified in the Ayurveda Formulary of India. It's used for fractures, sprains, osteoarthritis, and plantar fasciitis, and even rectally for hemorrhoids. Future research may explore converting it into user-friendly forms like ointments, gels, or patches.
2.	Standardization of Murivenna and Hemajivanti Taila	P.T.A. Hepsibah, Drug Standardization Unit, Ayurveda College Unit, Poojappura, Trivandrum – 695012, Kerala, India.	**Results of Murivenna Taila** Colour– Green Odour– Pleasant Smell Appearance– Viscous Touch– Oily Clarity– Clear Loss of Drying– 0.13% Acid Value– 2.17 Saponification Value mg/gm– 293.8 Iodine Value gm/100 gm– 10.58
3.	An Experimental Study to Evaluate Anti-Inflammatory Activity of Murivenna in Wistar Albino Rats	Vaishali V, Department of Rasashastra and Bhaishajya Kalpana (Medicinal Chemistry and Pharmacy), Amrita School of Ayurveda, Amritapuri, Amrita Vishwa Vidyapeetham, Clappana, Vallickavu, Kollam - 690525, Kerala, India.	Murivenna, prepared per Trivandrum Pharmacopeia and Ayurveda Formulary of India guidelines, underwent studies for acute and chronic inflammation. Significant anti-inflammatory activity was observed in acute inflammation, with reduced granuloma formation suggesting potential use in such conditions. In conclusion, Murivenna demonstrates stronger anti-inflammatory effects in acute rather than chronic inflammation.

Sr. No.	Article Name	Author Name	Result
4.	Clinical Efficacy of Murivenna Tail Katibasti in Katishula W.S.R. Lumbar Spondylosis	Dr. Jyoti Meghdambar, Assistant Professor and PG Guide, Rognidana Evam Vikriti Vigyan Department, Government Ayurved College, Nanded, Maharashtra, India	Ten patients received an 8-day treatment with Murivenna Taila, selected for its Vatashamak properties targeting Vatasthana. Significant improvements were observed in Kati shula symptoms, including enhanced movement range and reduced pain intensity. The procedure also effectively relieved pure Vataja or Vatakaphaja types of Katishula.

9.5 ▷ Vrana

JATYADI TAILA

Refenece: AFI, Part I

जातीनिम्वपटोलानां नक्तमालस्य पल्लवाः।।
सिक्थं समधुकं कुष्ठं द्वे निशे कटुरोहिणी।
मञ्जिष्ठा पद्मकं लोध्रमभया नीलमुत्पलम्।।
तुत्थकं सारिवा बीजं नक्तमालस्य दापयेत्।
एतानि समभागानि पिष्ट्वा तैलं विपाचयेत्।।
नाडीव्रणे समुत्पन्ने स्फोटके कच्छुरोगिषु।
सद्यः शस्त्रप्रहारेषु दग्धविद्धेषु चैव हि।।
नखदन्तक्षते देहे व्रणे दुष्टे प्रशस्यते।

(Sha. S.M., 9/168-171½)

INGREDIENT USED

Drug Name	Part Used	Proportion
Jati	Lf.	10.66 gms
Nimba	Lf.	10.66 gms
Patola	Lf.	10.66 gms
Karanja	Lf.	10.66 gms
Madhuchchhishta	–	10.66 gms
Yashti	Rt.	10.66 gms
Kushtha	Rt.	10.66 gms
Haridra	Rz.	10.66 gms
Daruharidra	St.	10.66 gms
Katuka	Rz.	10.66 gms
Manjishtha	Rt.	10.66 gms
Padmaka	Ht. Wd.	10.66 gms
Lodhra	St. Bk.	10.66 gms
Haritaki	P.	10.66 gms
Utpala	Fl.	10.66 gms
Tuttha	–	10.66 gms
Shveta Sariva	Rt.	10.66 gms
Karanja	Sd.	10.66 gms
Taila	Ol.	768 gms
Water	–	3.072 L

Procedure:

1. **Preparation of Kalka Dravya:**
   - Take all the ingredients for Kalka Dravya (Jati to Karanja) and grind them into a fine powder (Churna).
   - Add a sufficient quantity of water to the powdered herbs to make a thick paste (bolus form).
2. **Preparation of Drava Dravya:**
   - Collect jala as drava dravya.
3. **Mixing:**
   - In a clean vessel, add Tila taila as mention quantity along with Kalka Dravya and Drava Dravya.
4. **Heating:**
   - Place the mixture over a low flame. Stir continuously to prevent the Kalka from sticking to the bottom and ensure even cooking.
   - Maintain a consistent low flame to avoid burning the ingredients. Heat the mixture until the water content evaporates and sneha siddhi lakshanas.
5. **Filtering:**
   - Once the Sneha siddhi lakshana attains, remove it from the heat.
   - Filter the taila through a clean, dry cloth to remove the solid residues of the herbal paste.
6. **Cooling and Storage:**
   - Allow the filtered taila to cool down to room temperature.
   - Store it in a clean, dry, airtight container. Keep the container in a cool, dark place to preserve the potency of the medicated oil or ghee.

Usage: Used externally for Abhyanga.

Therapeutic Indications: Kachchu, Sphotaka, Nadivrana, Shastraprahara Varna, Dagdha Vrana, Danta-Nakha Kshata, Dushta Vrana.

PHARMACODYNAMICS

❖ **Anti-inflammatory:** Ingredients like Nimba, Patola, and Haridra have strong anti-inflammatory properties, reducing swelling and redness in wounds and skin conditions.

- **Antimicrobial**: Herbs such as Nimba, Karanja, and Madhuchchhishta provide antimicrobial effects, helping to prevent infections in wounds and skin diseases.
- **Wound Healing**: Manjishtha, Lodhra, and Haritaki promote wound healing by enhancing tissue regeneration and repair.
- **Astringent**: Lodhra and Haritaki act as astringents, which help to tighten tissues and reduce bleeding.
- **Analgesic**: Ingredients such as Yasti and Kushtha provide pain relief.
- **Antiseptic**: Haridra and Tuttha serve as antiseptics, preventing microbial growth and promoting a clean healing.

PHARMACOKINETICS

Absorption

- The preparation is absorbed through the skin when used externally. The base oil (Taila) facilitates the absorption of the active compounds into the dermal and subdermal layers.

Distribution

- The active compounds are distributed locally at the site of application. The massage (Abhyanga) process helps enhance the distribution of the ingredients to the affected areas, ensuring deeper penetration into the tissues.

Metabolism:

- Once absorbed, the active components are metabolized in the local tissues and systemically in the liver. Herbal constituents undergo biotransformation into active metabolites.

Excretion:

- Metabolites of the active ingredients are excreted through the kidneys and, to some extent, through bile and sweat.

RESEARCH UPDATES

Sr. No.	Article Name	Author Name	Result
1.	A Review on Jatyadi Taila & its Medicinal Properties	Dr. Manoj Kumar Meena, Associate Professor, PG Department of Shalya Tantra, National Institute of Ayurveda Deemed to University, Jaipur Rajasthan, India.	Jatyadi Taila, an ancient Ayurvedic oil, renowned for its potent wound-healing properties, is traditionally used to treat anal fissures and various wounds. It speeds up healing, aids in rapid recovery, and alleviates itching, inflammation, and burning. Effective for open wounds, cuts, burns, abscesses, eczema, blisters, and non-healing wounds, the review emphasizes its ingredients and medicinal benefits.
2.	Pharmaceutical Standardization of Prepared Form and Jatyadi Taila Murchchhita and Amurchchhita Tila Taila	Dhiraj Singh Rajput, Department of Rasashastra and Bhaishajya Kalpana, Mahatma Gandhi Ayurved College, Hospital and Research Centre, Salod (H.), Wardha, MHA, India.	In this study, we aimed to standardize oils based on references from Bhaishajya Ratnavali and Sharngadhara Samhita. Yield after preparation averaged 94.49%, with 5.51% weight loss. Preparation times for MJT and AJT were 7.49 hrs and 7.48 hrs, respectively, resulting in 8.5% and 7.83% weight losses. Heating spanned two days, with slightly higher temperatures on the first day (106°C for MJT, 98°C for AJT) than the second day (108°C for MJT, 97°C for AJT). Mild heating and continuous stirring were crucial for desired attributes in these oil preparations.
3.	Clinical Efficacy of Jatyadi Taila in Parikartika (Fissure- in-Ano)	Dr. Sanghamitra Samantaray, Associate Professor, Department of Shalya Tantra, SKSS Ayurveda Medical College, Sarabha, Ludhiana, Punjab, India.	Thirty patients diagnosed with Parikartika, irrespective of socio-economic status, aged between 18-45 years, and of any gender, were randomly chosen. They underwent treatment with Jatyadi Taila through local application for four weeks. The outcome demonstrated improved.

9.5. E Smashru

SHANKHA BHASMA

Reference: AFI, Part I

शुद्धशङ्खस्य खण्डानि शरावे स्थापयेत्सुधीः।
शरावेण पिधायाथ यत्नात्सन्धिं प्रलेपयेत्।।
आतपे त्वथ संशोष्य पुटेद् गजपुटे भिषक्।
स्वतः शीतं समुद्धृत्य खल्वे सञ्चूर्णयेद् भिषक्।।
चूर्णितञ्चाथ विज्ञाय सम्पुटस्थं ततः पुटेत्।
एवं पुटद्वयेनैव शङ्खको मृतिमाप्नुयात्।। (R.T, 12/17-19)

INGRIDENTS USED

Drug Name	Part Used	Proportion
Suddha Shankha	—	1 Part

Drug Name	Part Used	Proportion
Kumari Svarasa (or)	Lf.	Q.S. for Marana
Nimbu Svarasa	Fr.	Q.S. for Marana

Procedure:

Take all the ingredients as required. First, triturate Shuddha Shankha with Nimbu Svarasa for one day. Form thin, flat cakrikas and dry them under the sun. Place these cakrikas in a Sharava Samputa and apply Sandhi Lepa. Then, administer Gaja Puta. Repeat this process until the bhasma passes the bhasma pariksha.

Puta: Gajaputa- 2 in number.

Dose: 250 to 300 mg.

Anupana: Nimbu Svarasa, Triphala Kvatha.

Therapeutic Indications: Ajirna, Agnimantha, Grahani, Amalapitta, Parinama Shula, Yakritpliha Vriddhi, Visha.

Pharmacodynamics

1. **Suddha Shankha (Purified Conch Shell):**
   - *Main Component*: Rich in calcium and other minerals.
   - *Functions*: Neutralizes acidity, improves digestion, strengthens bones and teeth.
2. **Kumari Svarasa (Aloe Vera Juice):**
   - *Functions*: Acts as a medium for purification (Marana), enhances bioavailability, has anti-inflammatory and digestive properties.
3. **Nimbu Svarasa (Lemon Juice):**
   - *Functions*: Acts as a medium for purification (Marana), enhances absorption, provides an acidic environment for better conversion of the shell to Bhasma, aids in detoxification.

PHARMACOKINETICS

Absorption:

- Shankha Bhasma is administered orally. The fine particles are absorbed through the gastrointestinal tract.

Distribution:

- After absorption, the active components are distributed systemically, reaching the liver, stomach, and intestines where they exert their therapeutic effects.

Metabolism:

- The components are metabolized in the liver. The herbal juices (Kumari Svarasa and Nimbu Svarasa) used in the preparation aid in bioavailability and enhance the metabolic processes.

Excretion:

- Metabolites are excreted primarily through the kidneys. Some excretion also occurs via the intestines.

RESEARCH UPDATES

Sr. No.	Article Name	Author Name	Result
1.	Pharmaceutical Study of Shankha Bhasma by Two Different Methods	Dr. Arpita Sharma, P. G. Department of Rasa Shastra and Bhaishajya Kalpana, R.G.G.P.G. Ayurvedic College, Paprola, H.P., India	Based on Pharmaceutical studies: Six batches of Shankha Bhasma were prepared: three in Group A and three in Group B. Group A utilized Gajaputa at 900°C for preparation. Group B employed an initial open Marana process. Further analysis could reveal insights into Shankha Bhasma's efficacy and properties.
2.	A Critical Review on Therapeutic Uses of Shankha Bhasma	Dr. Laxmi Narayan Gupta, Department of Rasa Shastra & Bhaishajya Kalpana, Faculty of Ayurveda, IMS, BHU, Varanasi, U.P., India	The study aims to compile and evaluate all relevant work on Shankha Bhasma preparation, including pharmaceutical and analytical parameters standardization. It involves a thorough search of ancient Indian Ayurvedic literature and contemporary research databases. This effort seeks to offer insights into Shankha Bhasma's therapeutic potential, ultimately benefiting human life.
3.	Synthesis and Characterization of Shanku Bhasma–an Antiulcer Herbomineral Formulation	Shebina P. Rasheed, College of Pharmacy, Malappuram, Kerala, India	Shankha Bhasma, prepared traditionally, underwent standardization procedures. Organoleptic and physical parameters confirmed proper preparation, minimizing impurity risks. TGA identified the chemical form as calcium oxide, while XRD and EDAX revealed oval-shaped crystals of micro to nano size. AAS detected possible heavy metals. The observed antiulcer effect may result from calcium and other additives' synergistic action. Pharmacological studies affirmed its efficacy in aspirin-induced ulcer models.

9.5.F Kesha Ghanata

Kesha Ghanata is a term in Ayurveda referring to the density or thickness of hair. It encompasses the overall health and quality of hair, including its strength, texture, and volume. According to Ayurvedic principles, Kesha Ghanata is influenced by various factors, including individual constitution (Prakriti), diet, lifestyle, hormonal balance, and environmental influences.

In Ayurveda, maintaining Kesha Ghanata is considered essential for promoting overall health and vitality. Hair is seen as a reflection of one's internal balance, and Ayurvedic treatments aim to nourish and strengthen hair from the roots to enhance its density and quality.

To support Kesha Ghanata, Ayurveda recommends a holistic approach that includes proper nutrition, stress management, scalp care, and herbal treatments. This may involve the use of herbal oils, hair masks, scalp massages, dietary supplements, and lifestyle modifications tailored to individual needs and imbalances.

BHRINGARAJA TAILA

Reference: - AFI, Part-I

अनूपदेशसम्भूतं गृहीत्वा मार्कवं शुभम्।
सुधौतं जर्जरीकृत्य स्वरसं तस्य चाहरेत्।।
चतुर्गुणेन तेनैव तैलप्रस्थं विपाचयेत्।
क्षीरपिष्टैरिमैर्द्रव्यैः संयोज्य मतिमान् भिषक्।।
मञ्जिष्ठा पद्मकं लौध्रं चन्दनं गैरिकं वला।
रजन्यौ केशरञ्चैव प्रियङ्गु मधुयष्टिका।।
प्रपौण्डरीकं गोपी च पलिकान्यत्र दापयेत्।
सम्यक् पक्वं ततो नीत्वा शुभे भाण्डे निधापयेत्।।
केशपाते शिरोदुष्टे मन्यास्तम्भे गलग्रहे।
शिःकर्णाक्षिरोगेषु नस्येऽभ्यङ्गे च योजयेत्।।
कुञ्चिताग्रानतिस्निग्धान् कचान् कुर्याद् बहूंस्तथा।
खालित्यमिन्द्रलुप्तञ्च तैलमेतद् व्यपोहति।।

(B.R. Kshudraroga., 60/133-138)

INGREDIENTS USED:

Drug Name	Part Used	Proportion
Tila Taila	Ol.	768 ml
Bhringaraja	Pl.	3.072 L
Manjishtha	Rt.	48 gms
Padmaka	Ht. Wd	48 gms
Lodhra	St. Bk.	48 gms
Raktachandana	Ht. Wd.	48 gms
Gairika	–	48 gms
Bala	Rt.	48 gms
Haridra	Rz.	48 gms
Daru Haridra	St.	48 gms
Nagakeshara	Stmn.	48 gms
Priyangu	Fl.	48 gms
Yashti	Rt.	48 gms
Prapaundarika	Rt.	48 gms
Shveta Sariva	Rt.	48 gms

Procedure:

1. **Preparation of Kalka Dravya:**
   - Take all the ingredients for Kalka Dravya (Manjishtha to Shveta Sariva) and grind them into a fine powder (Churna).
   - Add a sufficient quantity of water to the powdered herbs to make a thick paste (bolus form).
2. **Preparation of Drava Dravya:**
   - Prepare the Kvatha, by whole plant of Bhringaraja Kvatha as per classical references.
3. **Mixing:**
   - In a clean vessel, add Tila taila as mention quantity along with Kalka Dravya and Drava Dravya.
4. **Heating:**
   - Place the mixture over a low flame. Stir continuously to prevent the Kalka from sticking to the bottom and ensure even cooking.
   - Maintain a consistent low flame to avoid burning the ingredients. Heat the mixture until the water content evaporates and sneha siddhi lakshanas.
5. **Filtering:**
   - Once the sneha siddhi lakshana attains, remove it from the heat.
   - Filter the taila through a clean, dry cloth to remove the solid residues of the herbal paste.
6. **Cooling and Storage:**
   - Allow the filtered taila to cool down to room temperature.
   - Store it in a clean, dry, airtight container. Keep the container in a cool, dark place to preserve the potency of the medicated oil or ghee.

Dose: Used Externally for Nasya, Sirobhyanga, and Kavalagraha.

Therapeutic Indications: Keshapata, Netraroga, Karna roga, Siroroga, Manya stambha, Galagraha, Khalitya, Indralupta.

PHARMACODYNAMICS

1. **Hair Growth and Scalp Health:** Ingredients like Bhrngaraja and Manjistha promote hair growth, prevent hair fall (Keshapata), and improve scalp health (Khalitya, Indralupta).
2. **Anti-inflammatory:** Herbs like Haridra and Daruharidra have strong anti-inflammatory properties, beneficial for conditions like Manya stambha (neck stiffness) and Galagraha (throat disorders).
3. **Nervine Tonic:** Nagakeshara and Bala act as nervine tonics, helping in neurological conditions like Siro roga (head disorders) and Karna roga (ear disorders).
4. **Antimicrobial:** Priyangu and Lodhra provide antimicrobial properties, protecting against infections.
5. **Antioxidant:** Raktachandana and Shveta Sariva are potent antioxidants, supporting overall tissue health and reducing oxidative stress.

PHARMACOKINETICS

1. **Absorption:** The preparation is applied externally and absorbed through the skin and mucous membranes. The sesame oil (Tila Taila) base facilitates deep penetration of the active ingredients.
2. **Distribution:** After absorption, the active compounds are distributed locally at the site of application. Techniques like Nasya (nasal application) and Sirobhyanga (head massage) enhance distribution to the target tissues, including hair follicles, scalp, and neural pathways.
3. **Metabolism:** Active components are metabolized in the local tissues and systemically in the liver, where they are converted into metabolites that exert therapeutic effects.
4. **Excretion:** Metabolites are primarily excreted through the kidneys and, to some extent, through sweat and bile.

RESEARCH UPDATES

Sr. No.	Article Name	Author Name	Result
1.	Pharmaceutico Analytical Study of Bhringaraja Taila & Its Modification Using Double Concentration of Bhringaraja W.S.R. to Heptlc Analysis	Lata Melkan, MD Scholar P.G. Deptt. of Rasa Shastra and Bhaishajya Kalpana, Uttarakhand Ayurved University, Rishikul Campus Haridwar, Uttarakhand, India	The study explored the pharmaceutical processing of Bhringaraja Taila and its modification with double the concentration of Bhringaraja, focusing on their HPTLC studies. Observations during drug preparation were discussed, alongside the area estimation of Bhringaraja Taila using HPTLC fingerprinting. Spot 1 of Bhringaraja Taila (sample I) had an Rf value of 0.16, with an area percentage of 8.71%. Sample II (DBT) showed an area percentage of spot 1 at 11.47%.
2.	Clinical Study on Effect of Different Procedures of Nasya with Bhringaraja Taila in Khalitya	Rajani Thankan, MD Scholar, Dept. of PG Studies in Panchakarma, AAMC, Moodbidri, Karnataka	Among the 30 patients, 10 (33.33%) experienced >61% relief, 18 (60%) had 31-60% relief, and 2 (6.66%) had 1-30% relief, with none showing no response. **Conclusion:** Charakokta nasya vidhi with Bhringaraja Taila provided better relief for Khalitya symptoms, especially hair fall and breakage, compared to Vagbhatokta nasya vidhi with Bhringaraja Taila.
3.	Pharmaceutico - Analytical Study of Bhringaraja Oil and its Conversion into Lotion	Ravibhushan Sadashiv Sonawane, Associate Professor, Dept. of Panchakarma, SST College, Sangamner, Maharashtra, India	**Bhringaraja Lotion Results** Appearance – Soft Creamy lotion, Free flowing Colour – Buff colour Odor – Characteristic Taste – Bitter Density – 0.9787 gm/ml PH – 3.5 Uniformity of Contents – Complies Spreadiblity – Uniformly Spreading Particle Size – 300 # Thermal Stability – Melts at 51°C Loss of Drying – 8.55%

9.5.6 Akala Palita

Akala Palita, also known as premature graying of hair, is a condition characterized by the premature loss of natural hair color, resulting in gray or white hair before the typical age of onset. This phenomenon can occur due to various factors, including genetic pre-disposition, oxidative stress, hormonal changes, nutritional deficiencies, and environmental factors. While graying of hair is a natural part of the aging process, premature graying may be distressing for affected individuals due to its perceived association with aging. Management strategies for Akala Palita may include addressing underlying health conditions,

adopting a healthy lifestyle, managing stress, and using hair dyes or cosmetic treatments to conceal gray hair. However, there is limited scientific evidence supporting the effectiveness of treatments for reversing premature graying. Despite the cosmetic concern it poses, Akala Palita generally does not indicate an underlying health problem and is not associated with significant health risks.

HASTI DANTA MASI

Reference: Su. Ch. 1/101

हस्तिदन्तमसीं कृत्वा मुख्यं चैव रसाञ्जनम्।
रोमाण्येतेन जायन्ते लेपात्पाणितलेष्वपि।। (Su. Chi., 1/101)

INGRIDENTS USED:

Drug Name	Part Used	Proportion
Hasti Danta	–	1 Part
Appropriate Liquid Media	–	Q.S.

Procedure:

Take all the ingredients as required. First, place Shuddha Hasthi Danta in a Sharava and apply Sandhi Lepa. Then, administer Laghu Puta. Repeat this process, adding any necessary liquid media such as Kumari Svarasa, until the masi is prepared.

Puta-Laghuputa- 2 in numbers.

Dose: External Application along with Rasanjana.

Therapeutic Indications: Khalitya, Palithya, Indralupta, Romaksata.

PHARMACODYNAMICS

1. **Hair Growth Stimulation**: The primary function of Hasthi Danta, Masi, especially when combined with Rasanjana, is to stimulate hair growth. It is effective in treating conditions like Khalitya (baldness), Palitya (premature graying), Indralupta (alopecia), and Romakshata (damage to hair follicles).
2. **Scalp Nourishment**: The ash of elephant tusk is believed to nourish the scalp, improve blood circulation, and rejuvenate hair follicles, leading to enhanced hair growth.
3. **Anti-inflammatory and Healing Properties**: The ash helps reduce inflammation and promotes healing of the scalp, which can be beneficial in treating damaged hair follicles and scalp conditions.

PHARMACOKINETICS

1. **Absorption**: When applied externally, the fine particles of Hasthi Danta Masi penetrate the scalp through hair follicles and skin pores. The use of Rasanjana (a form of collyrium) as a medium aids in the deeper penetration of the active constituents into the scalp.
2. **Distribution**: Once absorbed, the active compounds are distributed locally in the scalp tissues. The fine nature of the ash ensures it reaches the hair follicles and the surrounding areas, providing targeted treatment.
3. **Metabolism**: The components are locally metabolized within the scalp tissues. The mineral constituents of the ash may undergo minor biochemical transformations that aid in their therapeutic actions.
4. **Excretion**: Since Hasthi Danta Masi is used externally, the primary mode of excretion is through natural skin shedding and sweat. Any absorbed constituents that enter systemic circulation are likely to be excreted through renal and hepatic pathways.

9.5.H Indralupta

Indralupta, commonly known as alopecia areata, is a type of hair loss characterized by the sudden appearance of one or more round bald patches on the scalp or other hair-bearing areas of the body. This condition occurs when the immune system mistakenly attacks hair follicles, leading to hair loss. Indralupta can affect individuals of any age, gender, or ethnicity and may vary in severity from mild, localized patches to extensive hair loss.

ICHCHHABHEDI RASA

Reference: A.F.I., I, Rasayoga, 20:5, B.R., Udararoga

शुण्ठीमरिचसंयुक्तं रसगन्धकटङ्कणम्।
जैपालास्त्रिगुणाः प्रोक्ताः सर्वमेकत्र पेषयेत्।।
इच्छाभेदीद्विगुञ्जः स्यात्सितया सह पाययेत्।
यावन्तश्शुल्लुकाः पीतास्तावद्वेगाद् विरेचयेत्।।
तक्रौदनञ्च दातव्यमिच्छाभेदी यथेच्छया।।
(B.R., Udararoga, 40/84-85)

INGREDIENTS USED

Drug Name	Part Used	Proportion
Shunthi	Rz.	1 Part
Maricha	Fr.	1 Part
Shuddha Parada	–	1 Part
Shuddha Gandhaka	–	1 Part
Shuddha Tankana	–	1 Part
Shudda Jayaphala	Enm.	3 Parts

Procedure:

1. Collect all the ingridents of Ichchhabhedi Rasa.

2. First, prepare Kajjali by triturating Shuddha Parada and Shuddha Gandhaka in a mortar (Khalva Yantra).
3. Add the rest of the ingredients and grind well to ensure uniform mixing.
4. Shape the mixture into pills the size of 2 ratti (250 mg).
5. Dry the pills in the shade.
6. Preserve the dried pills in a glass container.

Dose: 250 mg.

Anupana: Cold Water.

Indications: Anaha, Udara roga.

PHARMACODYNAMICS

1. **Laxative Effect**: Ichchhabhedi Rasa has potent laxative properties, primarily due to ingredients like Shunthi (Ginger), Maricha (Black Pepper), and Jayaphala (Nutmeg), which stimulate the gastrointestinal tract, promoting bowel movements and relieving constipation (Anaha).
2. **Digestive Stimulation**: The combination of ingredients enhances digestive fire (Agni), aids in the digestion of food, and reduces abdominal disorders (Udararoga).
3. **Antimicrobial and Detoxifying Properties**: Shuddha Parada (Purified Mercury), Shuddha Gandhaka (Purified Sulphur), and Shuddha Tankana (Purified Borax) have antimicrobial and detoxifying effects, helping in cleansing the gastrointestinal tract.

PHARMACOKINETICS

1. **Absorption**: When taken orally, the ingredients of Ichchhabhedi Rasa are absorbed in the stomach and intestines. The bioactive compounds in Shunthi and Maricha are absorbed quickly due to their small molecular size and lipophilic nature, facilitating rapid onset of action.
2. **Distribution**: After absorption, the active compounds are distributed via the bloodstream to the gastrointestinal tract, where they exert their primary effects. Mercury and sulphur compounds may have a longer retention time in the body due to their ability to bind to proteins and other biomolecules.
3. **Metabolism**: Herbal components like Shunthi and Maricha are metabolized in the liver, undergoing biotransformation into active metabolites that enhance their therapeutic effects. Mercury, sulphur, and borax undergo limited metabolic transformation and are primarily excreted unchanged or as conjugates.
4. **Excretion**: The metabolites of the herbal ingredients are excreted through the kidneys in urine and through the intestines in feces. Mercury and sulphur compounds are excreted slowly through bile and kidneys, necessitating cautious use to avoid toxicity.

RESEARCH UPDATES

Sr. No.	Article Name	Author Name	Result
1.	Pharmaceutical Standardization of Ichhabhedi Rasa– An Ayurvedic Formulation	Darshana Mehkarkar, Senior Research Fellow, Regional Ayurveda Institute for Mother and Child Health, Nandanvan, Nagpur, (MHA)	The study aimed to standardize Ichchhabhedi Rasa. Materials were sourced from Wardha's local market and authenticated. Ichchhabhedi Rasa was prepared according to traditional methods. Physico-chemical properties were assessed to ensure quality and safety, meeting pharmacopoeial standards. It was concluded that 100 g of Ichchhabhedi Rasa could be obtained from 110 g of raw drugs, aligning with standards.
2.	Ichchhabhedi Rasa – A Herbo - Mineral Formulation Review	Nanditha Kamath, 2nd Year P.G. Scholar, Dept. of Rasashastra & Bhaishajya Kalpana, Taranath Govt. Ayurvedic Medical College, Karnataka, India	"Ichchhabhedi Rasa, comprised of Shunthi, Maricha, Shuddha Parada, Shuddha Gandhaka, Shuddha Tankana, and Shuddha Jayaphala, exhibits potent purgative effects when administered in appropriate doses and with suitable anupana. This article aims to review its pharmacological properties and discuss its likely mode of action."

9.5.1 Lomashatana

LOMASHATANA LEPA

Reference: B.R., Kshudrarogadhikara

स्यादेकभागो हरितालकस्य शङ्खस्य भागा अपि पञ्चनूनम्।
भागास्तु षट् पर्णतरोः प्रदिष्टा रम्भाम्भसा साधु विमर्दिताश्च।।
सप्ताहमेतन्ननु गुह्यदेशे प्रलेपितं लोमविनाशकं स्यात्।
पुनर्न रोहन्ति विलासिनीनामनेन लोमानि कदाचिदेव।।

(B.R., Kshudrarogadhikara, 60/169-170)

INGREDIENTS USED:

Drug Name	Part Used	Proportion
Haratal	–	1 Part

Drug Name	Part Used	Proportion
Shankha Bhasma	–	5 Parts
Plasha Kshara	–	6 Parts
Kadali Kanda Svarasa	St.	Q.S. for bhavana

Procedure:

1. Collect all the ingredients of Lomashatana Lepa.
2. Grind them into a fine powder and Bhavana with Kadali Kanda Svarasa.
3. Store it properly.
4. Before applying it to the body, mix with water or kadali kanda Svarasa as the medium to create a soft paste.

Dose: For External use only.

Therapeutic Indications: Kshudra Roga.

PHARMACODYNAMICS

1. **Depilatory Effect:** The primary action of Lomashatana Lepa is hair removal. Ingredients like Haratal (Orpiment) and Plasha Kshara have strong depilatory properties, which weaken the hair follicles and facilitate the removal of hair.
2. **Antimicrobial and Anti-inflammatory:** Shankha Bhasma (Conch Shell Ash) possesses antimicrobial and anti-inflammatory properties that help in preventing infections and reducing any potential inflammation caused by the application of the paste.
3. **Astringent Action:** The combination of these ingredients also has astringent properties, which help to tighten the skin and close the pores after hair removal.

PHARMACOKINETICS

1. **Absorption:** When applied externally, the paste is absorbed through the skin. The active components penetrate the outer layers of the skin to reach the hair follicles. The absorption rate is influenced by the viscosity and consistency of the paste, which is adjusted with Kadali Kanda Svarasa (Banana Stem Juice).
2. **Distribution:** Once absorbed, the active compounds distribute locally at the site of application. They specifically target hair follicles and the surrounding skin tissue. The local application minimizes systemic distribution, focusing the effects on the area where the paste is applied.
3. **Metabolism:** The active ingredients in the paste undergo minimal metabolism as they act primarily at the site of application. Any absorbed components are metabolized by the skin cells or may undergo minimal hepatic metabolism if they enter the systemic circulation in very small amounts.
4. **Excretion:** The residual paste and the weakened hair are removed through physical washing or rubbing off after the specified application time. Minimal systemic absorption means that the excretion through urine or bile is negligible.

RESEARCH UPDATES

Sr. No.	Article Name	Author Name	Result
1.	Pharmaceutico-Analytical Study of Lomapatana Lepa	Dinesh Gupta, Assistant Professor, Dept. of Rasashastra and Bhaishjya Kalpana, Jammu Institute of Ayurveda and Research, Nardani Raipur (Bantalab Road), Jammu, J&K, India	Lomapatana Lepa is a herbomineral preparation formulated with Shodita haratala, Shanka, and Palashakhara. Physico-chemical analysis reveals a pH of 8.78, Arsenic content of 2.33% w/w, and Calcium content of 22% w/w.
2.	Review on Lomapatana Yoga – Ayurvedic Formulations for Depilation	Ashwini Benjarwad, PG Scholar, Deptt. of Rasashastra and Bhaishajya Kalpana, Sri Dharmasthala Manjunatheshwara College of Ayurveda and Hospital, Hassan, Karnataka, India	Lomapatana Yoga contains Haratala, Shankha bhasma, Kadali kshara, Sarshapa talla, and Go-mutra. Shami provides Kashaya, Katu, Tikta rasas, and Laghu Ruksha guna, aiding Keshahrit and Pittavardhaka. Bhallataka has Ushna virya and Pittala properties. Haritala and Manahshila, sulphides of Arsenic, also have Ushna virya and Pittala traits, potentially weakening hair roots through Bhrajaka Pitta. Palashakshara (pH 9.8) and Kadali kshara (pH 12), along with Shankha bhasma, are strong alkalines. Excess Lavana and Kshara, as per Charaka Samhita, can cause hair loss.

Sr. No.	Article Name	Author Name	Result
3.	Efficacy of Lomapatana Yoga in Hypertrichosis —A Conceptual Study	Surabhi Chandra, Post Graduate Scholar, Dept. of PG Studies in Shalya Tantra, Govt. Ayurveda Medical College, Bengaluru, Karnataka, India.	The study suggests that trivalent Arsenic inhibits the PDH complex, disrupting lipoamide regeneration and reducing citric acid cycle activity, leading to decreased ATP production. Additionally, it impacts sulfahydral-containing enzymes involved in glucose uptake, diminishing nutrient supply to hair follicles and hindering hair growth.
4.	Clinical Study of Lomapatana Lepa W.S.R. to its Depilation Activity	Dr. Dinesh Gupta, J.S.S. Ayurveda Medical College, Mysore, Karnatka, India	The study found that Lomapatana Lepa exhibited effective depilatory activity. Additionally, no adverse effects were observed throughout the study period.

9.6 Guda Marga

Introduction

Guda Marga, or the anal route, refers to the anatomical pathway associated with the rectum and anus in the human body. In Ayurveda, Guda Marga plays a significant role in the elimination of waste products from the body, particularly stool. It is considered one of the vital pathways for excretion and detoxification.

Need

The proper functioning of Guda Marga is essential for maintaining digestive health and overall well-being. Efficient elimination of stool through the anal route helps prevent the accumulation of toxins in the body, supports proper digestion, and contributes to the balance of the doshas (biological energies) according to Ayurvedic principles. Any disruption or impairment in Guda Marga function can lead to digestive disorders, toxin buildup, and systemic imbalances.

Benefits

1. **Elimination of Toxins**: Guda Marga facilitates the removal of waste products, toxins, and undigested food material from the body, promoting detoxification and cleansing.
2. **Prevention of Constipation**: Proper functioning of Guda Marga helps prevent constipation by ensuring regular and efficient bowel movements, thereby supporting digestive health.
3. **Regulation of Doshas**: Ayurveda emphasizes the importance of balanced doshas for overall health. Healthy elimination through Guda Marga contributes to the balance of Vata, Pitta, and Kapha doshas.
4. **Support for Digestive Health**: The anal route is closely linked to the digestive system. Keeping Guda Marga healthy supports optimal digestion and absorption of nutrients.
5. **Prevention of Anal Disorders**: Maintaining the health of Guda Marga helps prevent common anal disorders such as hemorrhoids, anal fissures, and anal fistulas.

In Ayurveda

Dosage form used in Guda Marga Aushadha Prayoga:

1. **Vartis (Suppositories)**: Suppositories are solid dosage forms inserted into the rectum, where they dissolve or melt, releasing medication. **Example:** Arshoghni Vati, used for the treatment of hemorrhoids.
2. **Taila (Medicated Oils)**: Medicated oils are applied topically or inserted into the rectum to lubricate and soothe the anal passage. **Example:** Jatyadi Taila, used for the management of anal fissures.
3. **Ghrita (Medicated Ghee)**: Medicated ghee formulations are used for their lubricating and nourishing properties in the anal region. **Example:** Mahatiktaka Ghrita, used for treating anal itching and inflammation.
4. **Kalka (Paste)**: Pastes made from herbal powders or extracts are applied topically to the anal area for their therapeutic effects. **Example:** Arsha Kuthara Rasa, used for the treatment of hemorrhoids and anal fistulas.
5. **Churna (Powders)**: Herbal powders are either applied topically or inserted into the rectum for their healing properties. **Example:** Triphala Churna, used for promoting bowel movements and relieving constipation.
6. **Kashaya (Decoctions)**: Herbal decoctions are prepared by boiling medicinal herbs in water and are administered as enemas or used for sitz baths to alleviate anal discomfort. **Example:** Dashamula Kvatha, used for reducing inflammation and pain in the anal region.

9.7 Mutra Marga

Uttara Basti

Uttara Basti is a therapeutic procedure in Ayurveda where medicated oils or decoctions are administered through the urinary tract or vaginal canal. It is a specialized form of enema therapy targeted towards the upper urinary and reproductive pathways. Uttara Basti is primarily used for treating disorders related to the urinary system, reproductive system, and gynecological conditions in women.

The term "Uttara Basti" derives its name from the administration through the superior passages (urinary tract or vaginal canal), which are considered to have superior qualities due to their ability to absorb substances effectively. This therapy aims to leverage these qualities for therapeutic benefits, making it a specific treatment approach in Ayurveda.

उत्तरमार्ग दीयमानतया किंवा श्रेष्ठ गुणतया उत्तरबस्तिः।
(Cha.Si. 9/50, Chakra.Tika)

Uttara Basti is so named because it is administered through the superior passages (urinary tract or vaginal canal), specifically after Niruha Basti or through the Uttara Marga (urinary tract or vaginal canal). This distinguishes it from other forms of Basti (enema) therapies in Ayurveda, highlighting its targeted approach towards treating disorders related to the upper urinary and reproductive systems.

The need for Uttara Basti arises in various conditions that affect the urinary and reproductive systems, including urinary tract infections (UTIs), kidney stones, menstrual disorders, and infertility. Uttara Basti proves beneficial particularly in cases where oral medications or other conventional treatments have not been effective. It provides a targeted approach to deliver therapeutic agents directly to the affected organs, thereby enhancing treatment efficacy and alleviating symptoms.

Benefits of Uttara Basti

1. **Localized Treatment**: Uttara Basti delivers medicinal oils or decoctions directly to the affected organs, providing localized therapy and maximizing therapeutic effects.
2. **Enhanced Absorption**: Bypassing the digestive system, Uttara Basti allows better absorption of medicinal ingredients, ensuring effective distribution in the urinary and reproductive organs.
3. **Symptom Reduction**: By addressing the root causes of conditions, Uttara Basti helps reduce symptoms such as pain, swelling, urgency of urination, recurrence, and reproductive disorders.
4. **Nourishment and Rejuvenation**: The medicinal oils used in Uttara Basti contain nourishing and rejuvenating properties that enhance the health and function of urinary and reproductive organs.
5. **Minimal Side Effects**: When administered by a skilled practitioner, Uttara Basti is well tolerated compared to conventional systemic medications, with minimal side effects.
6. **Comprehensive Approach**: Uttara Basti is often integrated with other Ayurvedic treatments like dietary modifications, lifestyle changes, and herbal supplements to provide a holistic approach to treatment.

Types

Anuvasana (oil enema) is similar to Sneha Basti (unctuous enema), but is primarily used for therapeutic purposes. According to some scholars, Uttara Basti is also used similarly for oleation and is considered similar to Anuvasana for cleansing purposes.

1. According to Drava

a. Sneha Basti

b. Niruha Basti

2. According to Place

a. Mutramarga

b. Apatayamarga

Basti Netra

A. For Males:

पुष्पनेत्रं तु हैमं स्याच्छ्लक्ष्णमौत्तरबस्तिकम्।।
जात्यश्वहनवृन्तेन समं गोपुच्छसंस्थितम्।
रौप्यं वा सर्षपच्छिद्रं द्विकर्णं द्वादशाङ्गुलम्।। (Cha.Chi., 9/50-51)

1. It should be made of gold or silver metal.
2. The front part should resemble the flower bunch of Malati (Jasmine) or Karvira (oleander).
3. It should have a shape resembling the curvature of a cow's tail.
4. There should be a hole suitable for the release of mustard seed (Siddhartha) inside and in the front part of the eye.
5. It should be attached with two cartilage in the roots and in the middle.
6. The length of the eye should be twelve fingers (Charaka) or fourteen fingers (Sushruta).
7. In the male Pushpanetra, the middle part of the cartilage should be present

B. For Females:

पुष्पनेत्रप्रमाणं तु प्रमदानां दशाङ्गुलम्।।
मूत्रस्रोतः परीणाहं मुद्गस्त्रोतोऽनुवाहि च। (Cha. Si. 9/65-66)

1. It should be ten fingers long.
2. The design of Pushpa netra should match the extent of the urinary tract.
3. The thickness of the eye should be equal to the little finger.
4. The eye's aperture should be wide enough for a green gram to pass through.
5. Karnika (cartilage) should be four fingers long in Pushpanetra.
6. The eye should have three cartilages – two for binding and one in the front part.
7. Some scholars consider the thickness of the eye comparable to the iris.

POINT TO BE NOTED:

1. In the Yonimarga of females, Pushpa netra should be inserted up to 4 fingers.
2. In the Mutra marga of females, Pushpa netra should be inserted up to 2 fingers.
3. Only in the Mutra marga (under 10 years), Pushpa netra should be inserted up to 1 finger.

UTTARA BASTI IN MALES

1. After bathing, oleation (snehana), and fomentation (svedana), administer yavagu (a type of gruel made from medicinal herbs).
2. Seat the patient comfortably in a straight posture on a seat of knee height.
3. Perform gentle massage with warm oil over the upper part of the basti area.
4. Excite the urinary organ (mutrendriya).
5. Initially, use a ghee-coated mutra-shalaka (a small rod used to explore the urethra) to locate the urinary passage. Identify the passage and remove the shalaka.
6. Introduce the ghee-coated push panetra into the urinary organ in the same manner as bastinetra is inserted into the rectum.
7. Insert the pushpa netra according to the measure of the urinary organ. According to Sushruta, it should be inserted up to six angulas (fingers).
8. During the application of basti, press the basti pot with a steady and non-trembling hand to administer the medicine inside comfortably and with proper speed.
9. There should be no tremor in the hand while removing the pushpa netra.
10. When the oil used for Uttarabasti has drained out, administer another and then a third basti as needed.
11. Several bastis may be administered as per necessity.

UTTARA BASTI IN FEMALES

1. Seat the woman comfortably by lifting her buttocks, bending both legs, raising the knees, and facing the posterior part directly towards you.
2. Administer the pushpa netra (device) comfortably into the apatya marga (vagina) or mutramarga (urethra).
3. During the administration of basti, gently press the yoni (vagina) with tenderness and gradually introduce the pushpa netra with three karnikas (petals) into the yoni mukha (entrance of the vagina) and then press the basti.
4. Use oil 2, 3, or 4 times a day in a single ahora.
5. If the sneh (oil) of Uttara basti does not come out, use Pipalyadi varti. The thickness of the varti should be thicker according to the yonimukha.
6. Increasing the quantity of sneha, perform Uttarabasti for three days.
7. Then keep an interval of three days and again perform Uttara basti in the same manner for three days.

UTTARA BASTI PRATYAGAMAN

1. **Niruha Basti**: It should be retrieved after 1 muhurta (approximately 48 minutes) or immediately.
2. **Sneha Basti**: It should be retrieved after 3 yamas (approximately 6 hours).
3. If the sneha (oil) used in Uttarabasti does not come out, it should be ignored.
4. If the sneha does not come out even after passing the night, then purified cleansing basti should be administered again using the medicines of the cleansing group.

DOSAGE FORMS USED IN UTTARA BASTI

1. **Taila**: **Example: Kshirabala Taila** – This medicinal oil contains Bala (Sida cordifolia) and Kshira (milk), among other herbs. It is beneficial in conditions like urinary tract infections, kidney stones, and male reproductive disorders such as premature ejaculation.
2. **Ghrita**: **Example: Yoni Prakshalana Ghrita** - This medicinal ghee is prepared from Sariva (Hemidesmus indicus) and Daruharidra (Berberis aristata), among other ingredients. It is beneficial in conditions related to menstrual disorders, vaginal infections, and female infertility.

9.8 Yoni Marga

YONI DHARANA

INTRODUCTION

Yoni Dharana is an Ayurvedic therapeutic procedure that involves applying herbal pastes or poultices to the vaginal area (Yoni). It is a specialized form of local treatment aimed at addressing various gynecological issues, promoting reproductive health, and providing relief from discomfort or inflammation in the genital region.

Need for Yoni Dharana

Yoni Dharana is utilized in cases of gynecological disorders such as vaginal infections, inflammation, itching, and discharge. It is also beneficial for promoting overall vaginal health, maintaining pH balance, and supporting reproductive function. Yoni Dharana provides targeted relief and healing to the delicate tissues of the vagina, addressing specific concerns related to hygiene, comfort, and well-being.

Benefits of Yoni Dharana

1. **Relief from Vaginal Infections**: Herbal pastes used in Yoni Dharana have antimicrobial, antifungal, and anti-inflammatory properties, which help combat infections such as bacterial vaginosis, yeast infections, and urinary tract infections.
2. **Soothing Irritation and Itching**: Yoni Dharana helps soothe irritation, itching, and discomfort in the vaginal area, providing immediate relief and promoting healing of inflamed tissues.
3. **Maintaining Vaginal pH Balance**: Certain herbal formulations used in Yoni Dharana help maintain the natural pH balance of the vagina, preventing the overgrowth of harmful microorganisms and reducing the risk of infections.
4. **Supporting Reproductive Health**: Yoni Dharana is beneficial for women experiencing menstrual irregularities, vaginal dryness, or discomfort during intercourse. It helps promote lubrication, improve blood circulation, and support overall reproductive health.
5. **Postpartum Care**: Yoni Dharana is often recommended as part of postpartum care to promote healing and soothe the vaginal area after childbirth. It helps reduce inflammation, prevent infections, and alleviate discomfort associated with episiotomy or perineal tears.

Examples of Herbal Formulations for Yoni Dharana:

1. **Yoni Prakshalana Churna**: A herbal powder formulation containing ingredients like Triphala, Neem, and Lodhra, used for cleansing and detoxifying the vaginal area.
2. **Yoni Prakshalana Ghrita**: A medicated ghee prepared with herb like Sariva, Daruharidra, and Manjistha, used for soothing inflammation, promoting healing, and maintaining vaginal health.
3. **Yoni Kalka**: Herbal pastes prepared with ingredients like Haridra, Nimba, and Yashtimadhu, used for relieving itching, reducing discharge, and combating infections.

Yoni Dhavana

Yoni Dhavana is an Ayurvedic practice that involves washing or cleansing the vaginal area (Yoni) with herbal decoctions or infusions. It is a traditional method used to maintain vaginal hygiene, promote reproductive health, and alleviate discomfort or symptoms associated with various gynecological conditions.

Need for Yoni Dhavana

Yoni Dhavana is recommended for women experiencing vaginal infections, inflammation, itching, excessive discharge, or discomfort during menstruation. It helps to cleanse the vaginal area, remove impurities, and restore the natural balance of the vaginal flora. Yoni Dhavana is also beneficial for women seeking to maintain overall vaginal health and hygiene.

Benefits of Yoni Dhavana

1. **Cleansing and Purification**: Herbal decoctions used in Yoni Dhavana have cleansing and purifying properties, helping to remove dirt, bacteria, and toxins from the vaginal area.
2. **Relief from Infections**: Yoni Dhavana helps to alleviate symptoms of vaginal infections such as itching, burning, and unusual discharge by promoting a healthy vaginal environment and inhibiting the growth of harmful microorganisms.
3. **Reduction of Inflammation**: The soothing and anti-inflammatory properties of herbal decoctions used in Yoni Dhavana help to reduce inflammation and swelling in the vaginal tissues, providing relief from discomfort.
4. **Regulation of pH Balance**: Yoni Dhavana helps to maintain the natural pH balance of the vagina, which is essential for preventing the over growth of harmful bacteria and yeast that can lead to infections.
5. **Support for Menstrual Health**: Yoni Dhavana may help to alleviate menstrual cramps, discomfort, and excessive bleeding by promoting relaxation and improving blood circulation in the pelvic area.

Herbs Used in Yoni Dhavana

1. Neem (Azadirachta indica)
2. Turmeric (Curcuma longa)
3. Triphala (A combination of three fruits: Amalaki, Bibhitaki, and Haritaki)
4. Lodhra (Symplocos racemosa)
5. Daruharidra (Berberis aristata)
6. Yashtimadhu (Glycyrrhiza glabra)

These herbs are known for their antimicrobial, anti-inflammatory, and soothing properties, making them beneficial for vaginal health when used in Yoni Dhavana preparations.

Yoni Pichu

Yoni Pichu is an Ayurvedic therapy that involves applying medicated oil or herbal decoctions to the vaginal area using a cotton pad or tampon. It is a traditional practice aimed at promoting vaginal health, relieving discomfort, and balancing the doshas (energies) in the pelvic region.

Need for Yoni Pichu

Yoni Pichu is recommended for women experiencing various gynecological issues such as vaginal dryness, itching, inflammation, infections, or discomfort during

menstruation. It is also beneficial for women seeking to maintain overall vaginal hygiene and promote reproductive health.

Benefits of Yoni Pichu

1. **Hydration and Lubrication**: The application of medicated oil or herbal decoctions in Yoni Pichu helps to hydrate and lubricate the vaginal tissues, relieving dryness and discomfort.
2. **Soothing and Healing**: The herbal ingredients used in Yoni Pichu formulations have soothing and healing properties that help to reduce inflammation, itching, and irritation in the vaginal area.
3. **Prevention of Infections**: Yoni Pichu helps to maintain the natural pH balance of the vagina, creating an environment that is inhospitable to the growth of harmful bacteria and yeast, thus reducing the risk of infections.
4. **Balancing the Doshas**: According to Ayurvedic principles, imbalances in the doshas can contribute to gynecological problems. Yoni Pichu helps to balance the doshas in the pelvic region, promoting overall well-being and reproductive health.
5. **Relief from Menstrual Discomfort**: Yoni Pichu may help to alleviate menstrual cramps, discomfort, and excessive bleeding by promoting relaxation and improving blood circulation in the pelvic area.

Herbs and Oils Used in Yoni Pichu:

1. Coconut oil
2. Sesame oil
3. Neem oil
4. Triphala decoction (A combination of three fruits: Amalaki, Bibhitaki, and Haritaki)
5. Aloe vera gel
6. Daruharidra (Berberis aristata)
7. Yashtimadhu (Glycyrrhiza glabra)

Yoni Dhupana

Yoni Dhupana is a traditional Ayurvedic practice that involves fumigating the vaginal area with medicinal smoke. The word 'yoni' refers to the female reproductive organs, and 'dhupana' means fumigation. This practice is often utilized for postpartum care, treating infections, and maintaining vaginal health.

Need for Yoni Dhupana

1. **Postpartum Recovery**: Helps in healing and cleansing the vaginal area after childbirth.
2. **Treating Infections**: Used for treating and preventing infections such as yeast infections and bacterial vaginosis.
3. **Menstrual Disorders**: Alleviates symptoms of menstrual disorders like cramps, irregular periods, and heavy bleeding.
4. **Vaginal Hygiene**: Helps in maintaining cleanliness by detoxifying the vaginal canal.

Benefits of Yoni Dhupana

1. **Antimicrobial Properties**: The herbs used have antimicrobial effects that help treat and prevent infections.
2. **Anti-inflammatory Effects**: Reduces inflammation and soothes irritated tissues.
3. **Pain Relief**: Provides relief from pain and discomfort in the vaginal area.
4. **Hormonal Balance**: Helps in balancing hormones, beneficial for menstrual and menopausal symptoms.
5. **Enhanced Circulation**: Improves blood circulation in the pelvic area.
6. **Emotional Well-being**: Has a calming effect and reduces stress.

Herbs used in Yoni Dhupana

1. Turmeric
2. Neem
3. Chandana, etc.

Multiple Choice Questions

1. Which of the following practices involves holding a large quantity of oil or medicated liquid in the mouth for a specific period and then spitting it out?

a. Kavala
b. Gandusha
c. Pratisarana
d. Nasya

2. What is the primary benefit of Kavala (mouth rinsing)?

a. Detoxifying the oral cavity
b. Targeted treatment for specific oral conditions
c. Maintaining oral hygiene
d. Relieving sinus issues

3. Which of the following is NOT a benefit of Nasya Kalpana?

a. Clearing nasal congestion
b. Improving respiratory health
c. Treating gastrointestinal disorders
d. Enhancing mental clarity

4. Which Ayurvedic dosage form used in Mukha Kalpana is a powdered blend of threefruits?

a. Triphala Churna
b. Khadiradi Avaleha
c. Dant Kanti Vati
d. Arimedasava

5. In Nasya Kalpana, which medicated oil is commonly used to support sinus health and alleviate nasal congestion?

a. Brahmi Churna
b. Anu Taila
c. Ajavaina Arka
d. Arka Svarasa

6. Which Ayurvedic practice involves the application of medicated pastes or powders directly to the gums and teeth?
a. Kavala
b. Gandusha
c. Pratisarana
d. Nasya

7. Which of the following is NOT a benefit of Karna Kalpana?
a. Relief from ear infections
b. Improving hearing health
c. Enhancing cognitive function
d. Clearing earwax buildup

8. What is the primary purpose of Akshi Kalpana in Ayurveda?
a. Promoting ear health
b. Detoxifying the oral cavity
c. Enhancing eye health and treating eye ailments
d. Improving respiratory health

9. Which formulation is used in Akshi Kalpana to nourish and rejuvenate the eyes?
a. Triphala Ghrita
b. Bilva Ghrita
c. Anu Taila
d. Ajavaina Arka

10. In Mukha Kalpana, which practice helps in maintaining oral hygiene and preventing tooth decay through swishing oil or medicated liquid around the mouth?
a. Gandusha
b. Kavala
c. Pratisarana
d. Nasya

11. What is the main benefit of using medicated oils in Karna Kalpana?
a. Reducing nasal congestion
b. Relieving ear pain and inflammation
c. Enhancing cognitive function
d. Treating eye disorders

12. Which Ayurvedic practice is part of the Panchakarma therapies and involves theadministration of medicated substances through the nasal route?
a. Mukha Kalpana
b. Nasya Kalpana
c. Karna Kalpana
d. Akshi Kalpana

13. What is a common ingredient in toothpaste that helps strengthen tooth enamel andprevent tooth decay?
a. Calcium carbonate
b. Hydrated silica
c. Fluoride
d. Essential oils

14. Which Ayurvedic practice involves the preparation and application of medicated substances to promote overall ear health and address ear-related issues?
a. Mukha Kalpana
b. Nasya Kalpana
c. Karna Kalpana
d. Akshi Kalpana

15. What is the benefit of using Anu Taila in Nasya Kalpana?
a. Alleviating ear pain
b. Reducing eye strain
c. Supporting sinus health
d. Detoxifying the oral cavity

16. What is the main therapeutic indication for Sahacharadi Taila?
a. Sandhishotha
b. Khalitya
c. Kshudra Roga
d. Anaha

17. Which of the following ingredients in Murivenna Taila contributes to its anti-inflammatory properties?
a. Narikela (Coconut Oil)
b. Shatavari (Asparagus racemosus)
c. Sigru (Moringa oleifera)
d. Tandulambu (Rice bran)

18. What is the primary function of Jatyadi Taila?
a. Stimulate hair growth
b. Reduce inflammation and promote wound healing.
c. Relieve constipation
d. Improve digestion

19. How is Shankha Bhasma traditionally administered?
a. Orally
b. Topically
c. Through nasal drops
d. Through eye drops

20. Which therapeutic indication is NOT associated with Bhringaraja Taila?
a. Keshapata
b. Kshudra Roga
c. Netraroga
d. Khalitya

21. What is the primary therapeutic indication for Hasthi Danta Masi?
a. Palitya
b. Manya stambha
c. Romakshata
d. Khalitya

22. Which of the following statements about Ichchhabhedi Rasa is true?
a. It is primarily used to treat joint disorders.
b. It is administered with milk as an anupana.
c. It stimulates hair growth.
d. It has laxative properties.

23. What is the primary function of Lomapatana Lepa?
a. Stimulate hair growth
b. Relieve constipation
c. Promote wound healing
d. Facilitate hair removal

24. Which ingredient is NOT found in Ichchhabhedi Rasa?
a. Shunthi
b. Maricha
c. Shuddha Parada
d. Bhringaraja

25. What is the main therapeutic indication for Hasthi Danta Masi?
a. Khalitya
b. Palitya
c. Indralupta
d. Keshapata

26. What is the primary therapeutic indication of Sahacharadi Taila?
a. Kshudra Roga
b. Vata Vyadhi
c. Sandhishotha
d. Keshapata

27. Which herb is NOT an ingredient in Murivenna Taila?
a. Narikela
b. Karanja
c. Manjishtha
d. Shatavari

28. What is the primary mechanism of action of Jatyadi Taila?
    a. Laxative
    b. Antimicrobial
    c. Antispasmodic
    d. Analgesic
29. Which drug is NOT used in the preparation of Shankha Bhasma?
    a. Shuddha Shankha
    b. Kumari Svarasa
    c. Nimbu Svarasa
    d. Yashti
30. What is the primary therapeutic indication of Bhringaraja Taila?
    a. Ajirna
    b. Sandhishotha
    c. Keshapata
    d. Varna
31. What is the primary function of Hasthi Danta Masi?
    a. Promoting hair growth
    b. Laxative effect
    c. Stimulating digestion
    d. Relieving constipation
32. Which condition is NOT treated by Ichchhabhedi Rasa?
    a. Anaha
    b. Udara roga
    c. Khalitya
    d. Netraroga
33. What is the primary therapeutic indication of Romashatana Lepa?
    a. Udara roga
    b. Khalitya
    c. Kshudra Roga
    d. Netraroga
34. Which herb is NOT used in the preparation of Hasthi Danta Masi?
    a. Bala
    b. Haridra
    c. Nagakeshara
    d. Bhringaraja
35. Which metal is NOT used in the preparation of Ichchhabhedi Rasa?
    a. Parada
    b. Gandhaka
    c. Tankana
    d. Svarna
36. What is the primary function of Guda Marga in Ayurveda?
    a. Absorption of nutrients
    b. Elimination of waste products
    c. Regulation of blood pressure
    d. Maintenance of body temperature
37. Which of the following is NOT a dosage form used in Guda Marga aushadha prayoga?
    a. Vartis (Suppositories)
    b. Taila (Medicated Oils)
    c. Churna (Powders)
    d. Tablets (Pills)
38. Which herbal formulation is commonly used for the treatment of hemorrhoids via Guda Marga?
    a. Triphala Churna
    b. Jatyadi Taila
    c. Arshoghni Vati
    d. Mahatiktaka Ghrita
39. What is the main benefit of Uttara Basti in Ayurveda?
    a. Enhancing digestive health
    b. Treating respiratory disorders
    c. Targeted therapy for urinary and reproductive tract disorders
    d. Balancing mental health
40. Which medicated oil is used in Uttara Basti for conditions such as urinary tractinfections and kidney stones?
    a. Jatyadi Taila
    b. Kshirabala Taila
    c. Mahatiktaka Ghrita
    d. Arsha Kuthara Rasa
41. Which Ayurvedic practice involves applying herbal pastes to the vaginal area?
    a. Yoni Dhavana
    b. Yoni Pichu
    c. Yoni Dharana
    d. Yoni Dhupana
42. What is the primary purpose of Yoni Dhavana in Ayurveda?
    a. Oral administration of herbs
    b. Cleansing and maintaining vaginal hygiene
    c. Balancing mental health
    d. Enhancing skin complexion
43. Which herb is commonly used in Yoni Dhavana for its antimicrobial properties?
    a. Lodhra
    b. Haridra (Turmeric)
    c. Daruharidra
    d. Neem
44. What benefit does Yoni Pichu primarily provide?
    a. Hydration and lubrication of the vaginal tissues
    b. Improving vision
    c. Enhancing respiratory function
    d. Balancing blood sugar levels
45. What is the main use of Yoni Dhupana in postpartum care?
    a. Enhancing lactation
    b. Healing and cleansing the vaginal area
    c. Promoting hair growth
    d. Increasing appetite

Answers Keys

1.	b	2.	c	3.	c	4.	a	5.	b
6.	c	7.	c	8.	c	9.	a	10.	b
11.	b	12.	b	13.	c	14.	c	15.	c
16.	a	17.	c	18.	b	19.	a	20.	b
21.	d	22.	d	23.	d	24.	d	25.	a
26.	b	27.	d	28.	b	29.	d	30.	c
31.	a	32.	d	33.	c	34.	d	35.	d
36.	b	37.	d	38.	c	39.	c	40.	b
41.	c	42.	b	43.	d	44.	a	45.	b

Short Questions

1. Importance of Aushadhi Prayoga Marga.
2. Short Note on Uttara Basti and its dosage form.
3. Write short note on Shirodhara.
4. Probable Mode of action of Bhringaraja Talla.

Long Questions

1. Describe the importance of Mukha Kalpana and write the ingredients, probable mode of actionof Murvienna Talla.
2. Explain Nasya Kalpana in detailed and its dosage form with examples.

CHAPTER 10

RATIONAL PRESCRIPTION ALONG WITH SAFE DISPENSING OF AYURVEDIC FORMULATIONS

10.1 Introduction

The National Accreditation Board for Hospitals & Healthcare Providers (NABH) sets comprehensive guidelines to improve healthcare quality and ensure patient safety in India. These guidelines encompass various aspects of healthcare delivery, including rational prescription and safe dispensing of medications, which are crucial for preventing medication errors, optimizing patient outcomes, and promoting efficient healthcare delivery. When applied to Ayurvedic formulations, these guidelines help integrate traditional practices with modern standards of care, ensuring holistic and safe patient treatment.

10.2 Rational Prescription

1. Definition and Importance

Rational prescription involves the use of medications that are appropriate to the patient's clinical needs, in doses that meet their requirements, for an adequate period, and at the lowest cost to them and their community. This approach aims to ensure that patients receive the most effective treatment while minimizing the risk of adverse effects and medication errors. In Ayurveda, this means selecting formulations that are best suited to the patient's unique constitution (Prakriti) and disease condition (Vyadhi).

2. Key Guidelines

NABH emphasizes several core principles for rational prescription:

- **Evidence-Based Prescribing:**
  - Physicians are encouraged to prescribe medications based on the best available scientific evidence, considering the effectiveness, safety, and cost.
  - In Ayurveda, this includes using classical texts, recent research, and clinical experience to guide prescription.
- **Patient-Centered Care**
  - Prescriptions should be tailored to individual patient needs, considering factors such as age, gender, co-morbidities, and allergies.
  - In Ayurveda, this involves a thorough assessment of the patient's Dosha imbalance and Prakriti.
- **Comprehensive Documentation:**
  - Detailed documentation of prescribed medications, including dosage, frequency, and duration, is mandatory.
  - In Ayurvedic practice, this includes documenting the rationale for choosing specific formulations and treatments based on patient assessment.
- **Regular Review and Monitoring:**
  - Periodic review of the patient's medication regimen is recommended to assess efficacy and make necessary adjustments.
  - Monitoring for adverse drug reactions and ensuring patient adherence to the prescribed regimen are critical.

10.3 Safe Dispensing

1. Definition and Importance

Safe dispensing involves the accurate preparation and distribution of medications, ensuring that patients receive the correct drugs in the appropriate dosage and form. This process is vital for preventing dispensing errors, which can lead to significant patient harm.

2. Key Guidelines

NABH sets forth guidelines to enhance the safety and accuracy of the dispensing process:

- **Qualified Personnel**
  - Dispensing should be performed by qualified pharmacists or trained personnel under their supervision.

- In Ayurvedic practice, this may involve trained Ayurvedic pharmacists and practitioners.

❖ **Verification Processes**

- Double-checking the prescription against the medication being dispensed is crucial to prevent errors.
- This includes verifying the ingredients and preparation methods for Ayurvedic formulations.

❖ **Clear Labelling and Instructions**

- Medications must be clearly labelled with the patient's name, drug name, dosage, instructions for use, and expiry date.
- Ayurvedic formulations should also include specific instructions on administration, dietary restrictions, and lifestyle recommendations.

❖ **Storage and Handling**

- Proper storage conditions for medications must be maintained to ensure their efficacy and safety.
- Ayurvedic medicines, often prepared with natural ingredients, require specific storage conditions to maintain their potency.

❖ **Patient Education and Counselling**

- Pharmacists should counsel patients on the correct use of medications, potential side effects, and the importance of adherence to the prescribed regimen.
- This includes educating patients on the holistic approach of Ayurveda, which combines medication with lifestyle and dietary modifications.

Ensuring Patient Safety and Improving Healthcare Quality

1. **Prevention of Medication Errors**: By adhering to NABH guidelines, healthcare provi-ders can significantly reduce the risk of medication errors. Rational prescribing practices ensure that patien's receive appropriate medications, while safe di ensing protocols prevent errors during the medication preparation and distribution process.
2. **Optimizing Patient Outcomes**: Rational prescription and safe dispensing practices contribute to better patient outcomes by ensuring that patients receive effective and safe treatments tailored to their individual needs. Regular monitoring and patient education further enhance treatment efficacy and adherence.
3. **Enhancing Healthcare Efficiency**: Following NABH guidelines promotes efficient use of healthcare resources by minimizing wastage, reducing adverse drug reactions, and preventing hospital readmissions due to medication-related issues. This efficiency ultimately contributes to cost savings for both patients and healthcare systems.
4. **Building Patient Trust and Satisfaction**: Patients are more likely to trust and be satisfied with healthcare providers who adhere to high standards of care. Clear communication, patient education, and personalized care foster a positive healthcare experience, encouraging patients to adhere to their treatment regimens and engage actively in their care.

Conclusion

The NABH guidelines on rational prescription and safe dispensing play a crucial role in ensuring patient safety and improving healthcare quality. By promoting evidence-based prescribing, comprehensive documentation, qualified dispensing personnel, and patient education, these guidelines help to minimize medication errors and optimize patient outcomes. Adherence to these standards not only enhances the efficiency and effectiveness of healthcare delivery but also builds patient trust and satisfaction, ultimately contributing to better health outcomes and a more robust healthcare system.

10.4 Additional Guidelines for Rational Use of Ayurvedic Formulations

Rational drug use encompasses administering the appropriate medication to the right patient, in the correct dose, at the proper time, through the suitable route, and in an economically feasible manner. The World Health Organization (WHO) defines it as ensuring patients receive medications suitable for their clinical needs, at adequate doses, for the necessary duration, and at minimal cost to both them and their community :

1. **Safety and Effectiveness**: Drugs should be chosen based on their safety profile and proven efficacy for the patient's condition, considering factors like disease severity and available treatment options.
2. **Appropriateness**: This involves prescribing drugs for their approved indications, at the correct dosage, and ensuring proper dispensing and duration of treatment. Patient counseling is also crucial for understanding medication use.
3. **Economic Considerations**: Rational drug use doesn't just focus on price but also considers cost-effectiveness. It aims to minimize expenses for both the patient and the community while providing optimal treatment.

Approaches to Achieving Rational Drug Use

1. **Patient Evaluation**: Understanding the patient's medical history, including past illnesses and medication usage, is essential for accurate diagnosis and treatment planning.

2. **Diagnosis**: Accurate diagnosis is fundamental for rational therapy. It relies on comprehensive assessments, including laboratory findings, to identify the underlying causes of the patient's condition.
3. **Therapeutic Objectives**: Treatment goals may include symptom relief, disease prevention, or a combination of both, depending on the patient's needs.
4. **Treatment Options**: Treatment may involve medication, lifestyle changes, or a combination. When medication is necessary, the selection should prioritize drugs with proven efficacy, safety, suitability, cost-effectiveness, ease of administration, and appropriate storage requirements.
5. **Initiating Treatment**: Once a drug is prescribed, it should be administered as directe. Patient education is crucial, informing them about both the benefits and potential side effects of the medication. Patients should also be equipped with knowledge on how to manage any side effects that may occur. Planning a follow-up visit allows for the assessment of treatment progress.
6. **Assessing Treatment Results**: Evaluation of treatment efficacy involves physical examination and laboratory investigations. If the patient responds positively to the therapy, it is deemed rational. If not, the process returns to step 1 to reassess the patient's condition.
7. **Concluding Therapy**: The success of therapy is determined by assessing whether therapeutic goals were achieved and if patient problems were resolve. If these criteria aren't met, factors such as patient compliance and diagnostic accuracy should be re-evaluated.

This structured approach ensures that treatment decisions are continually reviewed and adjusted as needed, optimizing patient outcomes and promoting rational drug use. By adhering to these principles and approaches, healthcare providers can ensure that patients receive optimal therapy tailored to their clinical needs while also considering economic factors and minimizing the risks associated with medication use.

Drug Use Process Indicators

To ensure optimal drug therapy and rational drug use, several key steps need to be followed:

1. **Indication**: Ensure there is a clear and appropriate indication for its use before prescribing a drug. Address all medical problems therapeutically.
2. **Drug Selection**: Choose the most suitable drug based on its ability to achieve therapeutic goals, considering patient variables, formulary status, and therapy cost.
3. **Regimen Selection**: Determine the most appropriate drug regimen that accomplishes therapeutic goals at the least cost without compromising effectiveness or causing toxicity.
4. **Drug Provision**: Facilitate the dispensing and supply process to ensure accurate preparation, dispensing in ready-to-administer form, and timely delivery to the patient.
5. **Drug Administration**: Ensure that appropriate devices and techniques are used for drug administration to optimize effectiveness and minimize adverse effects.
6. **Monitoring**: Regularly monitor drug therapy for effectiveness and adverse effects. Based on monitoring results, decide whether to maintain, modify, or discontinue the therapy.
7. **Patient Counselling**: Provide thorough counselling and education to the patient or caregiver about the prescribed therapy to ensure proper use of medicines.
8. **Effectiveness Evaluation**: Evaluate the effectiveness of the patient's drug therapy by reviewing all previous steps of the drug use process. Take appropriate steps to ensure that therapeutic goals are achieved.

By diligently following these steps, healthcare professionals can ensure that drug therapy is rational, effective, safe, and economical, ultimately leading to improved patient outcomes.

Chapter At a Glance

Rational Prescription

Introduction

NABH Guidelines: The National Accreditation Board for Hospitals & Healthcare Providers (NABH) sets comprehensive guidelines to enhance healthcare quality and ensure patient safety in India, integrating traditional Ayurvedic practices with modern healthcare standards.

Rational Prescription

1. **Definition and Importance**
   - **Rational Prescription**: Involves appropriate use of medications tailored to patient needs, minimizing adverse effects and costs.
   - **Ayurvedic Context**: Selection based on the patient's constitution (Prakriti) and disease condition (Vyadhi).
2. **Key Guidelines**
   - Evidence-Based Prescribing
   - Patient-Centered Care

- Comprehensive Documentation
- Regular Review and Monitoring

SAFE DISPENSING

1. **Definition and Importance**

   Accurate preparation and distribution of medications to prevent errors and patient harm.

2. **Key Guidelines**
   - Qualified Personnel
   - Verification Processes
   - Clear Labelling and Instructions
   - Storage and Handling
   - Patient Education and Counselling
3. **Ensuring Patient Safety and Improving Healthcare Quality**
   - Prevention of Medication Errors
   - Optimizing Patient Outcomes
   - Enhancing Healthcare Efficiency
   - Building Patient Trust and Satisfaction

MULTIPLE CHOICE QUESTIONS

1. **What is the primary goal of rational prescription?**
   a. Minimizing the cost of medications
   b. Maximizing the profit for healthcare providers
   c. Ensuring patients receive the most effective treatment while minimizing risks and costs
   d. Increasing the number of medications prescribed
2. **Which principle emphasizes the use of medications based on scientific evidence?**
   a. Patient-Centered Care
   b. Evidence-Based Prescribing
   c. Comprehensive Documentation
   d. Regular Review and Monitoring
3. **In Ayurveda, what should be considered to tailor prescriptions to individual patients?**
   a. Age and gender only
   b. Disease condition and available modern treatments
   c. Dosha imbalance and Prakriti
   d. Cost and availability of medications
4. **What is a key aspect of comprehensive documentation in rational prescription?**
   a. Using electronic health records only
   b. Documenting dosage, frequency, and duration of prescribed medications
   c. Avoiding documentation to save time
   d. Recording patient satisfaction levels
5. **Why is regular review and monitoring of a patient's medication regimen important?**
   a. To increase the number of medications prescribed
   b. To assess efficacy and make necessary adjustments
   c. To reduce the workload of healthcare providers
   d. To ensure prescriptions are followed without change
6. **What is the definition of safe dispensing?**
   a. Preparing and distributing medications without labelling
   b. Accurate preparation and distribution of medications to ensure patients receive the correct drugs
   c. Dispensing medications to patients without verifying prescriptions
   d. Reducing the cost of medications during dispensing
7. **Who should perform the dispensing of medications according to NABH guidelines?**
   a. Any healthcare staff member
   b. Qualified pharmacists or trained personnel under their supervision
   c. Patients themselves
   d. Administrative staff
8. **What is crucial to prevent errors during the dispensing process?**
   a. Single-checking the prescription
   b. Double-checking the prescription against the medication being dispensed
   c. Skipping the verification process
   d. Relying solely on automated systems without human oversight
9. **Why is clear labelling and instructions on medications important?**
   a. To increase the price of the medication
   b. To ensure patients know how to use their medications correctly and safely
   c. To comply with legal requirements only
   d. To reduce the workload of healthcare providers
10. **What should be included on the labels of Ayurvedic formulations?**
    a. Just the drug name and dosage
    b. Patient's name, drug name, dosage, instructions for use, and expiry date
    c. Only the expiry date
    d. Cost and manufacturing details
11. **What is one of the benefits of patient education and counselling?**
    a. Increasing the number of medications taken by the patient

b. Enhancing patient adherence to the prescribed regimen
c. Reducing the time healthcare providers spend with each patient
d. Avoiding the need for follow-up visits

12. Which of the following is NOT a step in the rational drug use process?
a. Patient Evaluation
b. Indication
c. Random Selection
d. Monitoring

13. What should be the basis for selecting a drug according to rational drug use principles?
a. The drug with the highest price
b. Proven efficacy, safety, suitability, cost-effectiveness, and ease of administration
c. Recommendations from non-medical staff
d. The latest drug in the market

14. Why is it important to understand a patient's medical history before prescribing medication?
a. To increase the number of medications prescribed
b. To ensure accurate diagnosis and treatment planning
c. To avoid legal issues
d. To reduce the cost of treatment

15. Which step involves educating patients about their medications and potential side effects?
a. Drug Administration
b. Patient Counseling
c. Indication
d. Drug Provision

16. What should be done if a patient does not respond positively to therapy?
a. Continue with the same treatment
b. Reassess the patient's condition and adjust treatment as necessary
c. Discontinue all medications
d. Avoid further monitoring

17. What is one consequence of irrational prescribing?
a. Enhanced patient trust and satisfaction
b. Serious morbidity and mortality
c. Improved healthcare efficiency
d. Reduced antimicrobial resistance

18. Which factor is NOT a cause of irrational drug use?
a. Unreliable drug supply
b. Lack of patient education
c. Adequate training of healthcare providers
d. Influence of pharmaceutical industry promotions

19. What is the significance of regular monitoring in drug therapy?
a. To avoid unnecessary follow-ups
b. To ensure effectiveness and detect adverse effects
c. To increase the complexity of treatment
d. To reduce the cost of medications

20. Which approach involves using clinical guidelines to guide prescribing decisions?
a. Randomized prescribing
b. Problem-Based Pharmacotherapy Training
c. Establishment of Drugs and Therapeutics Committees
d. Development of Clinical Guidelines

ANSWERS KEYS

1.	c	2.	b	3.	c	4.	b	5.	b
6.	b	7.	b	8.	b	9.	b	10.	b
11.	b	12.	c	13.	b	14.	b	15.	b
16.	b	17.	b	18.	c	19.	b	20.	d

Short Answer Questions (SAQ)

- Write short note on Rational Prescription.
- Write short note on Rational Dispensing.

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CHAPTER 11

TRADITIONAL & LOCAL HEALTH PRACTICES & TKDL

11.1 Introduction to Traditional and Local Health Practices and Government Initiatives to preserve it

Introduction

Traditional and local health practices have been integral to human societies for centuries, embodying a wealth of knowledge passed down through generations. These practices encompass a variety of healing methods, including herbal medicine, acupuncture, Ayurveda, traditional Chinese medicine (TCM), indigenous healing, and many others. They are often deeply embedded in the cultural and spiritual lives of communities, offering holistic approaches to health and well-being. Governments worldwide have recognized the importance of preserving these practices, launching various initiatives to ensure their survival and integration into contemporary healthcare systems.

Understanding Traditional and Local Health Practices

1. Definition and Scope:

Traditional health practices refer to health knowledge, skills, and practices based on the theories, beliefs, and experiences indigenous to different cultures. They include:

- **Herbal Medicine**: Use of plant-based substances for therapeutic purposes.
- **Ayurveda**: An ancient Indian system of medicine focused on balance within the body and with nature.
- **Traditional Chinese Medicine (TCM)**: Encompasses acupuncture, herbal medicine, and Qigong, emphasizing harmony within the body.
- **Indigenous Healing Practices**: Vary widely but often include spiritual healing, shamanism, and the use of local herbs.

2. Importance in Contemporary Health Systems:

Traditional and local health practices are crucial for several reasons:

- **Accessibility**: Often more accessible and affordable, especially in rural or low-income areas.
- **Cultural Relevance**: Align with the cultural and spiritual beliefs of the communities, enhancing acceptance and adherence.
- **Holistic Approach**: Focus on overall well-being, including mental, emotional, and spiritual health.

Benefits of Traditional and Local Health Practices

1. **Holistic and Preventive Care**: Traditional practices often emphasize preventive care and holistic health, addressing not just physical ailments but also emotional and spiritual aspects. For example, Ayurveda and TCM focus on maintaining balance and preventing disease.
2. **Biodiversity and Sustainable Use**: These practices promote the use of local plants and natural resources, contributing to biodiversity conservation and sustainable practices. They also preserve valuable ethnobotanical knowledge.
3. **Empowerment and Community Involvement**: Traditional health practices empower communities by valuing their knowledge and promoting self-reliance in healthcare. This can strengthen social cohesion and cultural identity.
4. **Complementary Role in Modern Medicine**: When integrated with modern healthcare, traditional practices can complement conventional treatments, enhancing their effectiveness and patient satisfaction. For instance, acupuncture is widely used to manage pain and side effects of chemotherapy.

Challenges in Preserving Traditional and Local Health Practices

1. **Scientific Validation**: A major challenge is the lack of rigorous scientific validation for many traditional practices, which can hinder their acceptance and integration into main stream healthcare.

2. **Standardization and Regulation**: The variability in the preparation and use of traditional remedies poses challenges for standardization and regulation. Ensuring safety, quality, and efficacy is crucial.
3. **Intellectual Property and Ethical Issues**: Protecting the intellectual property rights of indigenous communities and ensuring fair benefit-sharing from the commercialization of traditional knowledge is essential but complex.
4. **Knowledge Erosion**: Globalization and modernization can lead to the erosion of traditional knowledge, as younger generations may adopt modern practices over traditional ones.

Government Initiatives to Preserve Traditional and Local Health Practices

1. **Policy Development and Regulatory Frameworks:**
   - **National Policies**: Many countries have developed national policies to promote traditional medicine. For instance, China's government has integrated TCM into its national health system, supported by the State Administration of Traditional Chinese Medicine (SATCM).
   - **Legal Frameworks**: Governments have established regulatory frameworks to ensure the safe and effective use of traditional practices. The World Health Organization (WHO) provides guidelines to help countries develop these frameworks. India's Ministry of AYUSH regulates traditional health systems, ensuring standards and safety.
2. **Research and Development:**
   - **Funding for Research**: Governments allocate funds for research to scientifically validate traditional health practices. The National Center for Complementary and Integrative Health (NCCIH) in the United States supports research on traditional and complementary medicine.
   - **Establishment of Research Institutions:** Dedicated research institutions study traditional health practices. In India, the Central Council for Research in Ayurvedic Sciences (CCRAS) and the Central Council for Research in Unani Medicine (CCRUM) conduct extensive research in their respective fields.
3. **Education and Training:**
   - **Inclusion in Medical Curricula:** Many medical schools include traditional medicine in their curricula. This integration ensures that healthcare professionals are knowledgeable about both traditional and modern practices. For example, Chinese medical schools teach TCM alongside Western medicine.
   - **Professional Training and Certification**: Certification programs for traditional healers ensure standardized practices and improve the quality of care. The Ministry of AYUSH in India offers certification for practitioners of Ayurveda, Yoga, Naturopathy, Unani, Siddha, and Homeopathy.
4. **Documentation and Knowledge Preservation:**
   - **Digitization Projects**: Efforts to document and digitize traditional health knowledge are crucial for preservation. The Traditional Knowledge Digital Library (TKDL) in India aims to protect traditional knowledge from biopiracy and make it accessible for research.
   - **Intellectual Property Rights**: Protecting the intellectual property rights of traditional knowledge holders is vital. International agreements like the Nagoya Protocol on Access and Benefit-Sharing support these efforts, ensuring that communities benefit from their knowledge.
5. **Promotion and Awareness Campaigns:**
   - **Public Health Campaigns**: Governments run campaigns to raise awareness about the benefits of traditional health practices. For instance, India's "Yoga for Health" campaign promotes the practice of yoga for wellness.
   - **Cultural Festivals and Events:** Cultural events celebrating traditional health practices help preserve and promote them. The International Day of Yoga, celebrated worldwide, highlights the significance and benefits of yoga.

Conclusion

Traditional and local health practices are invaluable components of global health systems, offering accessible, culturally relevant, and holistic healthcare solutions. Government initiatives play a critical role in preserving these practices, ensuring their integration into modern healthcare. Through policy development, research funding, education, documentation, and promotion, governments can protect and utilize traditional health knowledge, enhancing healthcare quality and accessibility for diverse populations. The collaborative efforts of governments, communities, and international organizations are essential for the sustainable preservation and integration of traditional and local health practices.

11.2 Traditional Knowledge Digital Library (TKDL)

Introduction

The Traditional Knowledge Digital Library (TKDL) is an initiative undertaken by the Government of

India to document and protect traditional knowledge, particularly in the domains of Ayurveda, Unani, Siddha, and Yoga. The project aims to prevent the misappropriation of India's rich traditional knowledge by creating a comprehensive database that can be accessed and used to challenge patent applications that attempt to wrongly claim such knowledge as novel inventions.

Website: www.tkdl.res.in

Objectives of TKDL

1. **Protection of Traditional Knowledge:** TKDL seeks to protect traditional knowledge from biopiracy and misappropriation by documenting it in a standardized format that is accessible to international patent offices.
2. **Promotion of Traditional Knowledge:** By documenting and digitizing traditional knowledge, TKDL promotes the use and appreciation of India's cultural heritage on a global platform.
3. **Facilitation of Research and Development:** The database serves as a valuable resource for researchers and practitioners of traditional medicine, encouraging innovation and the development of new therapies.

Key Features of TKDL

1. **Comprehensive Database:** TKDL contains detailed information on traditional medicinal formulations, practices, and texts. It translates this knowledge into multiple languages, including English, German, French, Spanish, and Japanese, making it accessible to a wider audience.
2. **Collaboration with Patent Offices:** TKDL collaborates with major international patent offices to prevent the grant of erroneous patents. It provides evidence from its database to refute patent claims that lack novelty or involve traditional knowledge.
3. **Multi-Disciplinary Approach:** The project involves experts from various fields, including traditional medicine practitioners, scientists, and information technology professionals, to ensure accurate and comprehensive documentation.
4. **User-Friendly Interface:** The digital library is designed to be user-friendly, allowing easy access to documented traditional knowledge for researchers, patent examiners, and other stakeholders.

Impact of TKDL

1. **Preventing Biopiracy:** TKDL has successfully challenged and prevented several patent applications based on traditional knowledge, thereby safeguarding India's intellectual property.
2. **Global Recognition:** The initiative has gained global recognition for its innovative approach to protecting traditional knowledge, serving as a model for other countries.
3. **Encouraging Ethical Research:** By providing a legitimate source of traditional knowledge, TKDL encourages ethical research and development, ensuring that benefits derived from traditional knowledge are shared fairly with communities that have preserved it.

Traditional Knowledge Digital Library (TKDL) for Indian Systems of Medicine

1. The TKDL project involves experts from various fields including Traditional Medicine (such as Ayurveda, Unani, Siddha, and Yoga), patent examiners, IT specialists, scientists, and technical officers.
2. TKDL serves as a crucial link between traditional knowledge documented in local languages and patent examiners at Intellectual Property Offices (IPOs).
3. By 2010, TKDL had transcribed 148 books on Ayurveda, Unani, Siddha, and Yoga, resulting in a vast repository of 34 million pages of information.
4. The information transcribed in the TKDL has been translated into five languages: English, German, French, Spanish, and Japanese, making it accessible to a wider audience.
5. Data on a significant number of formulations has been included in the TKDL: 80,000 in Ayurveda, 1,000,000 in Unani, and 12,000 in Siddha.
6. The TKDL integrates traditional knowledge with modern systems, facilitating its preservation, accessibility, and recognition on a global scale.
7. This initiative helps prevent the misappropriation of traditional knowledge by ensuring that it is accessible to patent examiners, thus safe guarding the rights of traditional knowledge holders.
8. The success of TKDL highlights the importance of collaboration between different stakeholders including traditional medicine practitioners, government agencies, and technical experts.

Sources of Information

1. **Database Content:** The TKDL currently houses codified and published literature from the Indian Systems of Medicine.

2. **Formulations**: It contains over 3.6 lakh formulations derived from texts of traditional medicine systems such as Ayurveda, Unani, and Siddha.
3. **Expert Selection**: The selection of books included in the TKDL is based on inputs from distinguished experts representing each stream of traditional medicine.
4. **Digitization Process**: The digitization of medicinal information began with the incorporation of openly available knowledge found in published books.
5. **Time of Origin**: The time of origin mentioned in the TKDL corresponds to the lifespan of the authors of the respective books.
6. **Compiled Books**: For compiled books, the time of origin is not specified, as it depends on the time of origin of the back-references from which the information is sourced.

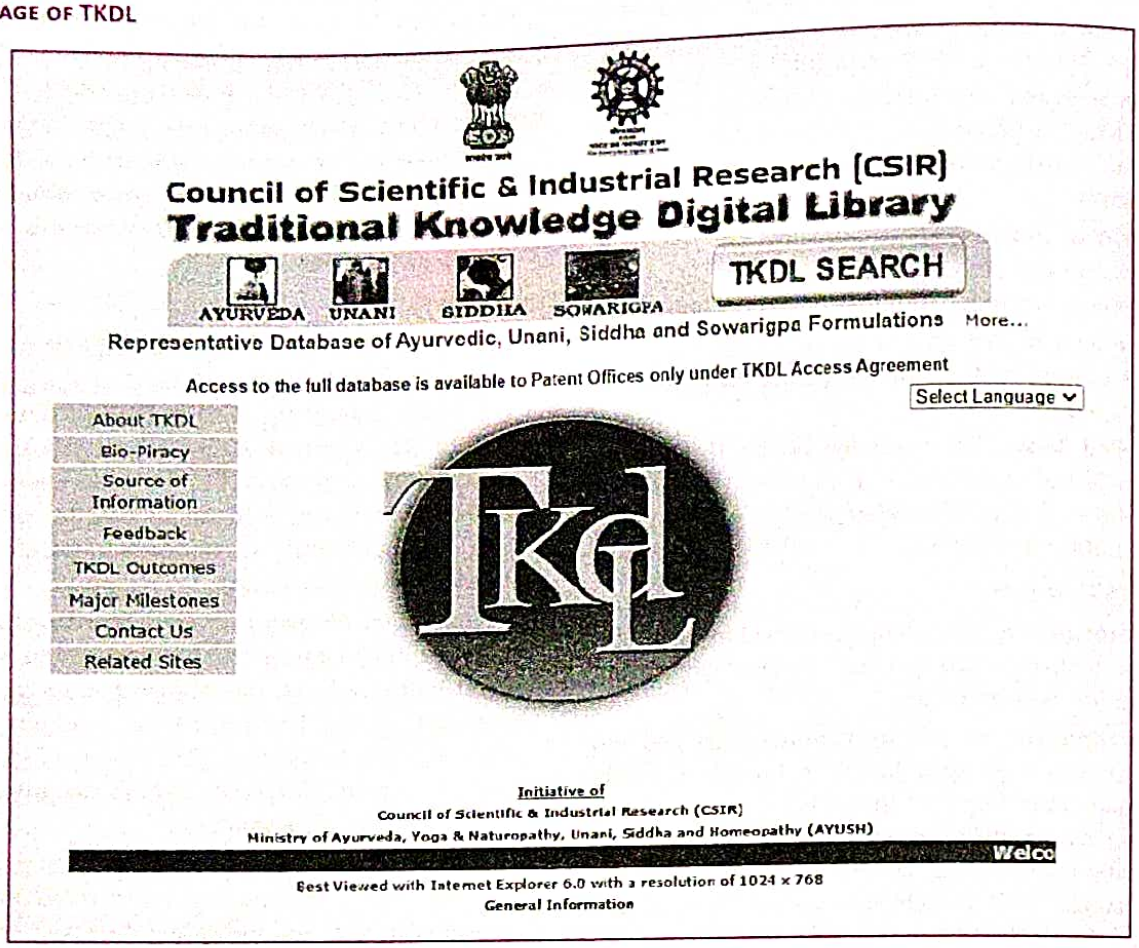
HOW THE TKDL WORKS

1. **Data Storage**: The knowledge extracted from ancient Indian texts is stored in a digital format comprising 34 million A4 size pages.
2. **Translation**: The stored information is translated into five foreign languages: Japanese, English, Spanish, German, and French. This translation process is not merely transliteration but a knowledge-based conversion, ensuring accuracy and clarity across languages. This is achieved using Unicode and Metadata methodology.
3. **Access Agreements**: TKDL has signed access and non-disclosure agreements with the Indian patent office and seven other global patent offices. This ensures robust security measures to safeguard India's valuable bioresources against piracy.
4. **Technical Expertise**: The development and maintenance of TKDL require not only advanced technology but also the expertise of individuals knowledgeable in ancient texts, modern medicine, and technical terms of foreign languages.
5. **Global Effort**: TKDL represents a significant global undertaking, requiring substantial financial investment. The project cost approximately Rs. 16 crore to develop and maintain this unique proprietary system.

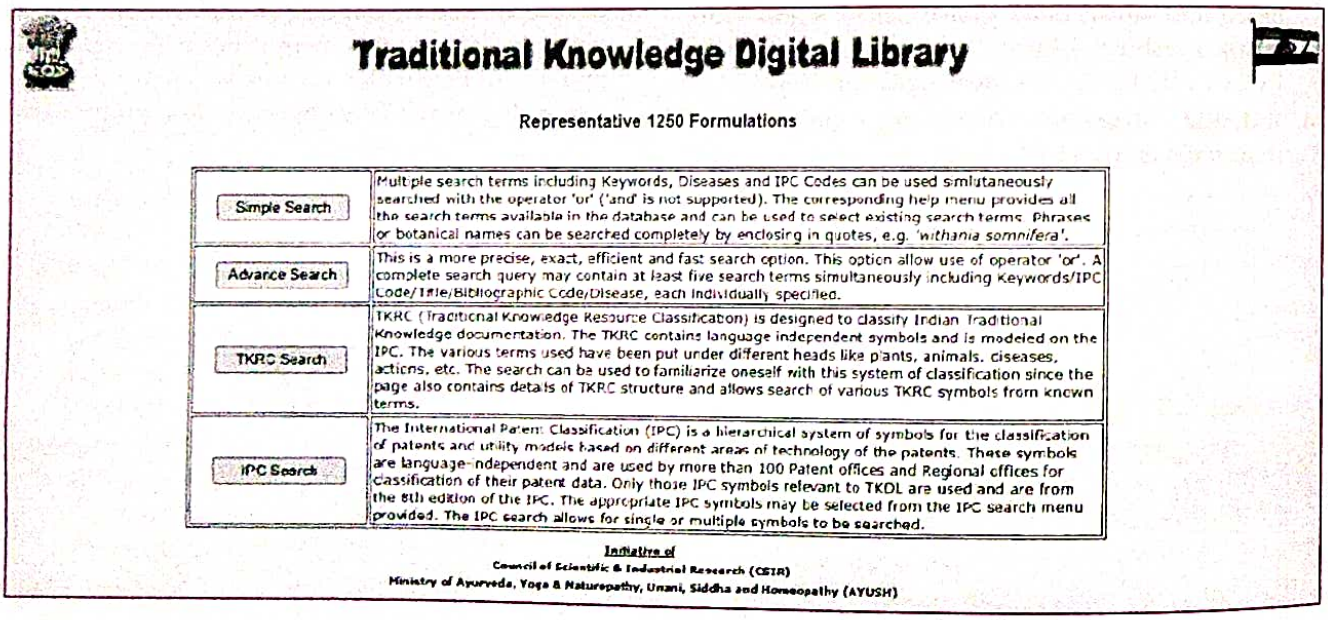
BENEFITS OF TKDL

1. **Combatting Bio piracy**: TKDL has successfully identified 1,000 cases of biopiracy of India's traditional knowledge (TK) in the last three years. Out of these, patent claims were withdrawn or cancelled in 105 cases by the respective patent offices. This is achieved at no cost to India and within a significantly shorter time frame compared to traditional legal battles.
2. **Cost and Time Efficiency**: TKDL eliminates the need for spending large sums of money and time in legal battles against bio piracy. For instance, the Agricultural and Processed Food Products Export Development Authority (APEDA) spent 7 years and Rs 7.62 crore in legal fees to fight for the intellectual property rights of basmati rice.
3. **Decline in Patent Claims**: There has been a notable decline of up to 44% in patent claims filed on Indian systems of medicine, indicating the effectiveness of TKDL in preventing wrongful patenting.
4. **Inclusion of Yoga Postures**: TKDL has expanded its database to include videos of the most common yoga postures. This addition helps prevent the wrongful granting of patents for yoga exercises in the West, addressing an increasing trend in misappropriation of traditional knowledge.

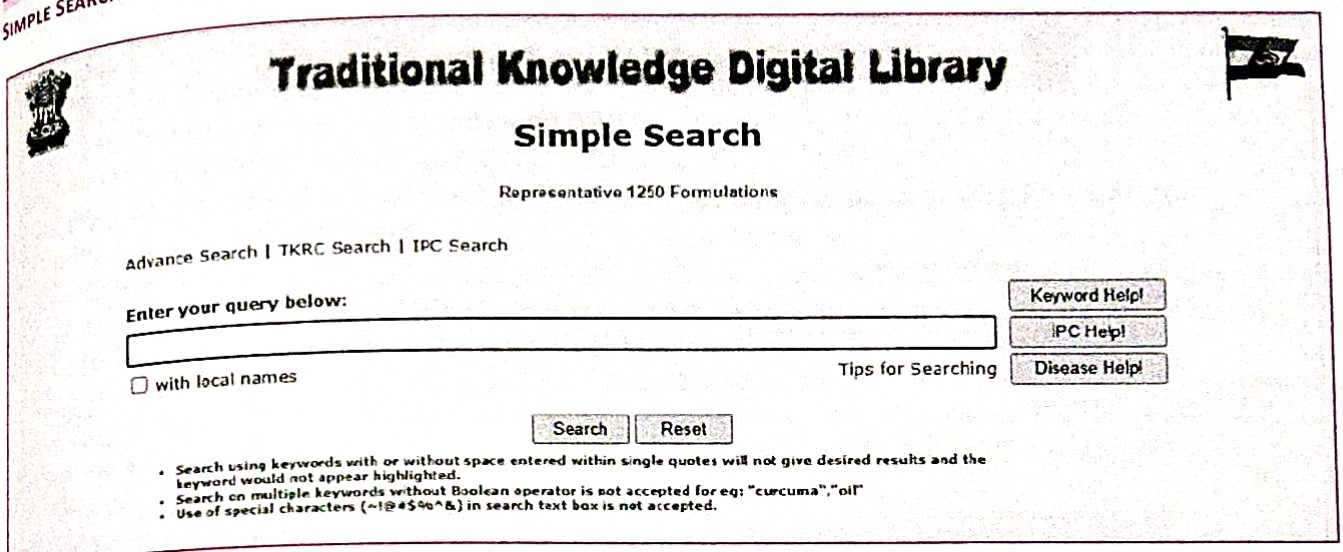
Home Page of TKDL



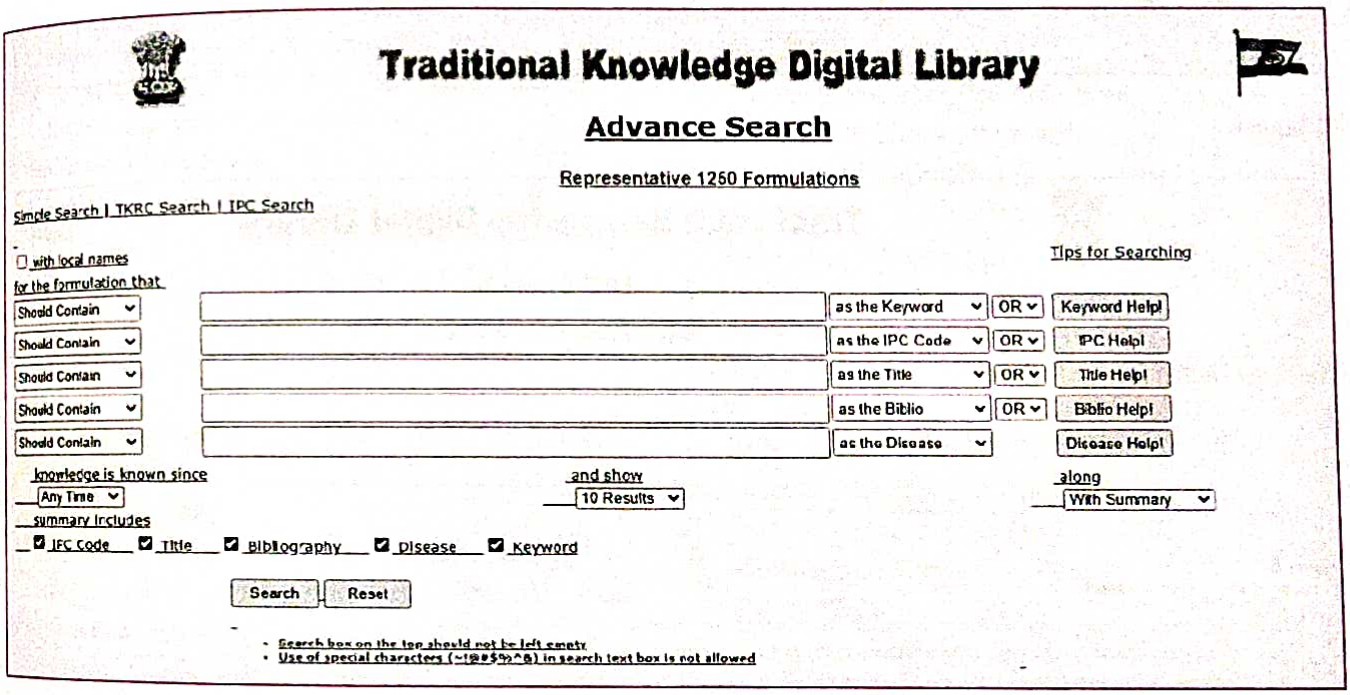
Search Types


Traditional Knowledge Digital Library
Representative 1250 Formulations
Simple Search
Multiple search terms including Keywords, Diseases and IPC Codes can be used simultaneously searched with the operator 'or' ('and' is not supported). The corresponding help menu provides all the search terms available in the database and can be used to select existing search terms. Phrases or botanical names can be searched completely by enclosing in quotes, e.g. 'withania somnifera'.
Advance Search
This is a more precise, exact, efficient and fast search option. This option allow use of operator 'or'. A complete search query may contain at least five search terms simultaneously including Keywords/IPC Code/Title/Bibliographic Code/Disease, each individually specified.
TKRC Search
TKRC (Traditional Knowledge Resource Classification) is designed to classify Indian Traditional Knowledge documentation. The TKRC contains language independent symbols and is modeled on the IPC. The various terms used have been put under different heads like plants, animals, diseases, actions, etc. The search can be used to familiarize oneself with this system of classification since the page also contains details of TKRC structure and allows search of various TKRC symbols from known terms.
IPC Search
The International Patent Classification (IPC) is a hierarchical system of symbols for the classification of patents and utility models based on different areas of technology of the patents. These symbols are language-independent and are used by more than 100 Patent offices and Regional offices for classification of their patent data. Only those IPC symbols relevant to TKDL are used and are from the 8th edition of the IPC. The appropriate IPC symbols may be selected from the IPC search menu provided. The IPC search allows for single or multiple symbols to be searched.
Initiative of
Council of Scientific & Industrial Research (CSIR)
Ministry of Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homeopathy (AYUSH)

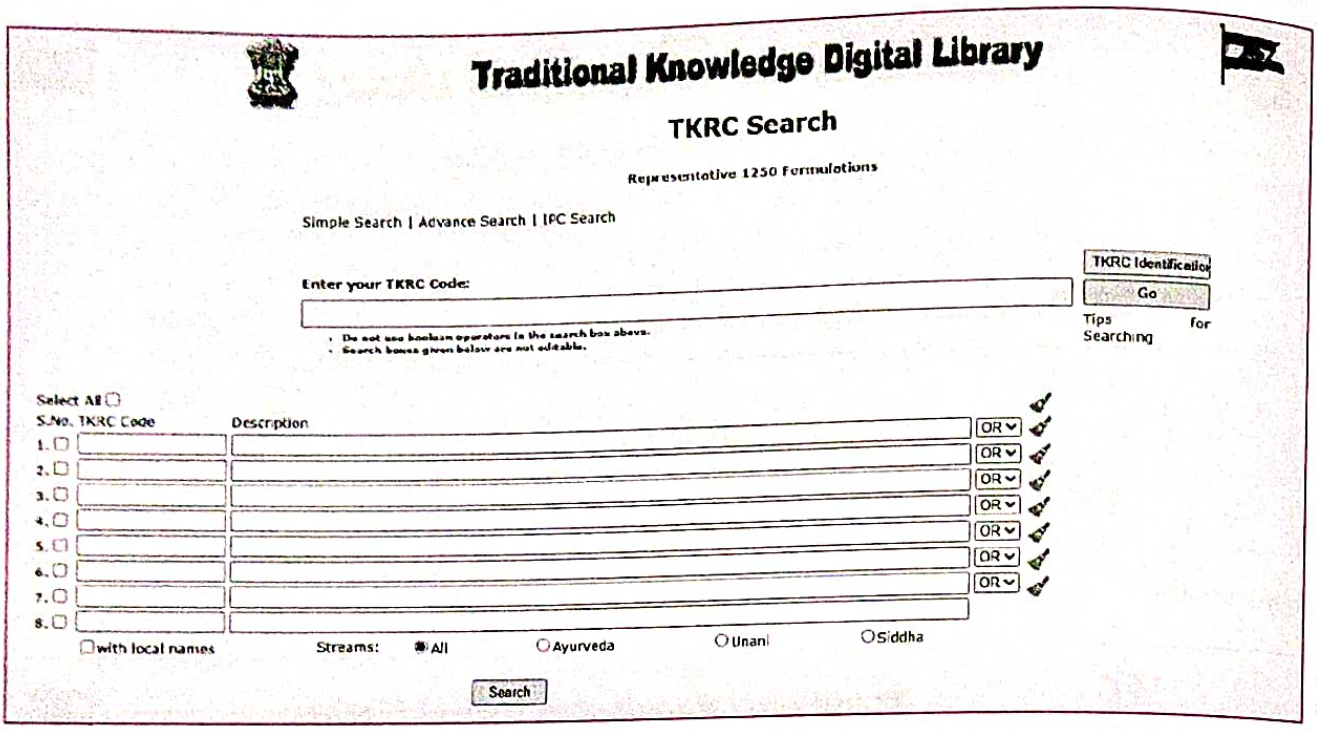
SIMPLE SEARCH


Traditional Knowledge Digital Library
Simple Search
Representative 1250 Formulations
Advance Search | TKRC Search | IPC Search
Enter your query below:
Keyword Help!
IPC Help!
Disease Help!
with local names
Tips for Searching
Search
Reset
Search using keywords with or without space entered within single quotes will not give desired results and the keyword would not appear highlighted.
Search on multiple keywords without Boolean operator is not accepted for eg: "curcuma","oil"
Use of special characters (~!@#$%^&) in search text box is not accepted.

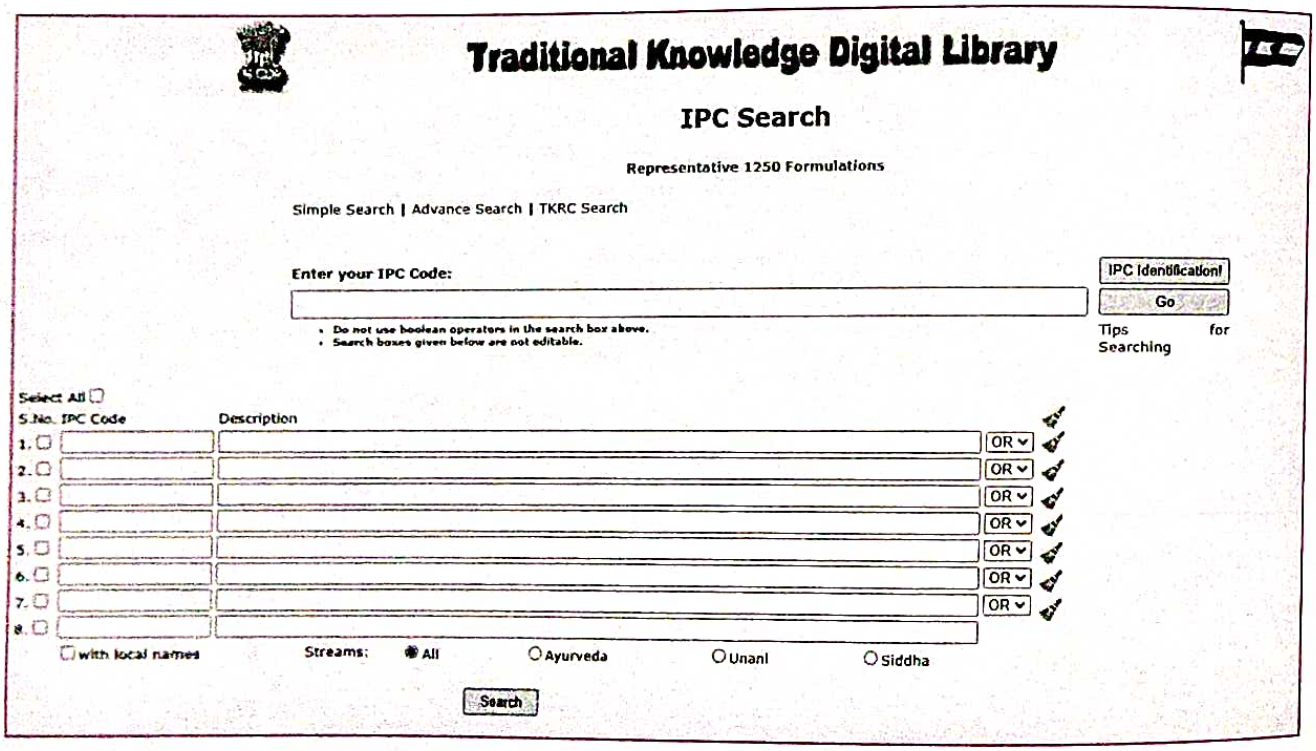
ADVANCE SEARCH



TKRC Search



IPC Search



Chapter At A Glance

TRADITIONAL AND LOCAL HEALTH PRACTICES

1. Importance of Traditional and Local Health Practices

- Include herbal medicine, Ayurveda, traditional Chinese medicine (TCM), and indigenous healing.
- Offer holistic health solutions addressing physical, mental, and spiritual well-being.
- More accessible and culturally relevant, particularly in rural and low-income areas.
- Contribute to biodiversity conservation and community empowerment.
- Complement modern medical treatments.

2. Challenges in Preservation

- Scientific Validation: Lack of rigorous scientific validation.
- Standardization and Regulation: Variability in preparation and use.
- Intellectual Property: Protecting rights and ensuring fair benefit-sharing.
- Knowledge Erosion: Risk of losing traditional knowledge due to globalization.

3. Government Initiatives

- Policy Development and Regulatory Frameworks:
- Establish national policies and legal frameworks.
- Examples: China's integration of TCM, India's Ministry of AYUSH.

Research and Development

- Fund research to validate traditional practices.
- Establish institutions like India's CCRAS and CCRUM.

Education and Training

- Integrate traditional medicine into medical curricula.
- Provide certification programs for traditional healers.

Documentation and Knowledge Preservation

- Digitize traditional knowledge (e.g., India's Traditional Knowledge Digital Library).
- Protect intellectual property rights through international agreements like the Nagoya Protocol.
- Promotion and Awareness Campaigns.
- Run public health campaigns (e.g., India's "Yoga for Health" campaign).
- Celebrate traditional practices through cultural events (e.g., International Day of Yoga).

Conclusion

- Government initiatives are crucial for preserving traditional health practices.
- Ensuring their integration into modern healthcare improves quality and accessibility.
- Collaboration among governments, communities, and international organizations is essential for sustainable preservation and utilization of traditional health knowledge.

TRADITIONAL KNOWLEDGE DIGITAL LIBRARY (TKDL)

Introduction

TKDL is an initiative by the Government of India to document and protect traditional knowledge in Ayurveda, Unani, Siddha, and Yoga.

Objective: Prevent misappropriation of India's traditional knowledge by creating a comprehensive, accessible database to challenge wrongful patent claims.

Objectives of TKDL

1. Protection of Traditional Knowledge
2. Promotion of Traditional Knowledge
3. Facilitation of Research and Development

Key Features of TKDL

1. Comprehensive Database:
2. Collaboration with Patent Offices
3. Multi-Disciplinary Approach
4. User-Friendly Interface

Impact of TKDL

1. Preventing Biopiracy
2. Global Recognition
3. Encouraging Ethical Research

Traditional Knowledge Digital Library (TKDL) for Indian Systems of Medicine

1. Expert Collaboration
2. Linking Local and Global
3. Extensive Documentation
4. Multilingual Access
5. Vast Repository
6. Integration with Modern Systems
7. Preventing Misappropriation
8. Collaborative Success

Sources of Information

1. Database Content
2. Formulations
3. Expert Selection
4. Digitization Process.
5. Time of Origin

How TKDL Works

1. Data Storage
2. Translation

3. Access Agreements
4. Technical Expertise
5. Global Effort

Benefits of TKDL

1. Combatting Biopiracy
2. Cost and Time Efficiency
3. Decline in Patent Claims
4. Inclusion of Yoga Postures

MULTIPLE CHOICE QUESTIONS

1. Traditional health practices encompass:
a. Modern surgical techniques
b. Use of antibiotics
c. Herbal medicine
d. Radiation therapy

2. Ayurveda is an ancient system of medicine originating from:
a. China
b. Egypt
c. India
d. Greece

3. The emphasis of Traditional Chinese Medicine (TCM) is on:
a. Surgical procedures
b. Balancing the body's energy
c. Antibiotic treatments
d. Radiation therapy

4. Traditional and local health practices are important for:
a. Being costly and inaccessible
b. Being culturally irrelevant
c. Being holistic and accessible
d. Focusing only on physical health

5. One of the challenges in preserving traditional health practices is:
a. Lack of scientific validation
b. Over-regulation
c. Standardization of practices
d. Strong intellectual property protection

6. Which government agency in China supports Traditional Chinese Medicine (TCM)?
a. World Health Organization (WHO)
b. State Administration of Traditional Chinese Medicine (SATCM)
c. National Center for Complementary and Integrative Health (NCCIH)
d. Ministry of AYUSH

7. The Nagoya Protocol on Access and Benefit-Sharing aims to:
a. Encourage biopiracy
b. Protect intellectual property rights of traditional knowledge holders
c. Limit access to traditional knowledge
d. Exclude traditional knowledge from commercial use

8. What does the National Center for Complementary and Integrative Health (NCCIH) support?
a. Research on traditional and complementary medicine
b. Regulation of traditional medicine
c. Standardization of traditional practices
d. Promotion of modern surgical techniques

9. Which country's Ministry of AYUSH regulates traditional health systems?
a. China
b. United States
c. India
d. Brazil

10. What does the Traditional Knowledge Digital Library (TKDL) aim to achieve?
a. Promote biopiracy
b. Preserve traditional knowledge and protect from biopiracy
c. Standardize traditional practices
d. Exclude traditional knowledge from research use

ANSWERS KEYS

1.	c	2.	c	3.	b	4.	c	5.	a
6.	b	7.	b	8.	a	9.	c	10.	b

Short Answer Questions (SAQ)

- Short Note on Traditional and local Health Practices.
- Write short note on TKDL.

• • •

CHAPTER 12

PHARMACOVIGILANCE FOR AYURVEDA DRUGS

12.1 Introduction

Pharmacovigilance is a crucial aspect of clinical research, involving the detection, assessment, understanding, and prevention of adverse effects of medicines, both short-term and long-term. It encompasses clinical trial safety and post-marketing surveillance throughout a product's lifecycle.

In India, pharmacovigilance is still developing, with limited knowledge and progress compared to western countries. Understanding its importance and impact on the product lifecycle is essential for integrating good practices, ensuring regulatory compliance, and enhancing safety.

Pharmacovigilance aims to reduce the risk of drug-related harms to patients. In India, the National Pharmacovigilance Program, initiated in 2003 under the Central Drug Standards Control Organization (CDSCO), focuses on this goal. The WHO has emphasized including traditional medicines in pharmacovigilance systems and published guidelines on safety monitoring of herbal medicines in 2004.

Etymology: The word 'pharmaco' comes from the Greek 'pharmacon', meaning medicine, and 'vigilance' comes from the Latin 'vigilantia', meaning alertness and attentiveness. Pharmacovigilance is about being absolutely alert and watchful about the medicines we give to patients.

Definition: Pharmacovigilance is the science and activities related to detecting, assessing, understanding, and preventing adverse effects or any other medicine-related problems. It aims to ensure the safety and effectiveness of medications, protecting patients from harm and improving public health outcomes.

12.2 Important Terminology

Adverse Drug Reaction: 'a response to a medicine which is noxious and unintended, and which occurs at dose normally used in man.' or 'any response to a drug that is noxious and unintended and that occurs at doses used in man for prophylaxis, diagnostic or therapy, excluding failure to accomplish the intended purpose.

Adverse Drug Event: 'any untoward medical occurrence that may present during treatment with a medicine, but which does not necessarily have a causal relationship with the treatment.'

Side Effect: Side effect is any unintended effect of a pharmaceutical product occurring at doses normally used in human which is related to the pharmacological properties of the drug.

In Classical *Ayurveda* also prescribes metals and minerals as medicines given as bhasmas or in combination with plants as herbo-mineral formulations (*e.g. Arogyavardhini*).

12.3 History

- **Thalidomide tragedy**: 1960, German + 46 countries, More than 20,000 affected- phocomelia.
- **India**: On November 22, 2010, Hrithik Roshan experienced an allergic reaction to antibiotics, resulting in spasms in his lungs and throat.

Examples

1. **Bromfenac (NSAID)**: Year of Marketing: - 1997, Year of Withdrawal: - 1998, Reasons for Withdrawal: - Serious Hepatotoxic Effects.
2. **Benoxaprofen (NSAID)**: Year of Marketing: - 1982, Year of Withdrawal: - 1982, Reasons for Withdrawal: - Liver Necrosis.

12.4 Major Development in PV

- **1962**— Amendment to Federal Food, Drug and Cosmetic Act- Required both safety and efficacy data.
- **1963**— British Committee on Safety of Drug Monitoring.

- 1964— UK Starts Yellow Cards System.
- 1964-1965— National Adr Reporting System uk, Australia, New Zealand, Canada, West Germany, Swedan.
- 1968— WHO:- Progrramme for international drug monitoring.
- 1978— WHO Center moved from Geneva to Uppsala.

In India

- 1986— ADR monitoring system for indian proposed
- 1997— India Joined WHO- ADR monitoring programme
- 2004-2008— National PV Programme overseen by CDSCO
- 2010— Pharmacovigilance Programme of India.

12.5 PV Centers In India

1. **PV centers**: (2) Seth GS medical college Mumbai and AIIMS, New Delhi.
2. **RPV Centers**: (5) Kolkata, Mumbai, Nagpur, New Delhi and Pondicherry.
3. **Peripheral PV centers**: (28)
4. **CDSCO zonal offices**: North zone- Ghaziabad, East zone- Kolkata, West zone- Mumbai, South zone- Chennai, Zonal office – Ahmedabad and Hyderabad.

National Pharmacovigilance Programme for ASU Drugs (NPP-ASU) The National Pharmacovigilance Programme for Ayurveda, Siddha, and Unani (ASU) drugs was initiated in December 2007, following a workshop sponsored by the World Health Organization (WHO) at IPGT and RA, Jamnagar, to explore the implementation of pharmacovigilance for ASU drugs. The protocol and adverse drug reaction (ADR) reporting forms were developed and discussed by the Department of Ayurveda, Yoga & Naturopathy, Unani, Siddha, and Homoeopathy (AYUSH), Government of India, in August 2008. The final draft was released by the Department of AYUSH on September 29, 2008. Since then, IPGT and RA, Jamnagar, India, has served as the National Pharmacovigilance Resource Centre for ASU drugs in India.

Furthermore, on January 20, 2005, Schedule Y of the Drugs and Cosmetics Act (DCA) was comprehensively amended to include extensive pharmacovigilance obligations for companies intending to manufacture and market new drugs in India.

12.6 Adverse Drug Reaction in Ayurveda

योगादपि विषं तीक्ष्णं उत्तमम्भेषजं भवेत्।
भेषजं चापि दुर्युक्तम् तीक्ष्णं संपद्यते विषम्।। (Cha. Su. 1/ 126)

यथा विषं यथा शस्त्रं यथाऽग्निश्शनिर्यथा।
तथौषधमविज्ञातं विज्ञातममृतं यथा।। (Cha. Su. 1/124)
अभेषजमिति ज्ञेयं विपरीतं यदौषधात्।
तद्सेव्यं निषेव्यं तु.....।। (Cha. Chi. 1/ 25)

Need of PV in ASU

In ancient times, Ayurvedic physicians prepared medicines for their patients themselves. However, today, this practice is followed by only a handful of practitioners, as the production and sale of Ayurvedic drugs have evolved into a formalized and thriving industry. The manufacture and marketing of Ayurvedic drugs are regulated by the Drugs and Cosmetics Act, 1940.

Broadly, two categories of medicines labelled as "Ayurvedic" are available in the market: Classical Ayurvedic formulations, which adhere to descriptions in Ayurveda samhitas (e.g., kutajarishta), and patent and proprietary formulations made from herbal extracts. There are 8,403 licensed Ayurvedic pharmacies, and the industry's approximate turnover is Rs. 4,000 crore, accounting for nearly a third of the total pharmaceutical business in India.

However, this commercialization has brought challenges regarding the safe use of Ayurvedic medicines, emphasizing the need for formal pharmacovigilance programs in the field. Despite this, the number of adverse reactions to Ayurvedic drugs reported or recorded in the National Pharmacovigilance Program in India is negligible. This is largely attributed to the strong belief that Ayurvedic medicines are safe.

Who can report an ADR?

1. Clinician
2. Nurses/ Drug Provider
3. Consumers
4. Pharmacist
5. Pharmaceutical Company.

Benefits of Pharmacovigilance (PV)

1. Provides information about adverse drug reactions (ADRs) to the general population.
2. Knowledge of adverse effects helps in effective treatment.
3. Helps to detect rare ADRs that may not be identified in pre-marketing surveillance.
4. Aids in collecting comprehensive data on ADRs from all sections of society, including various diseases and dietary traditions, which may not be included in pre-marketing surveillance.
5. Facilitates the development of a better system for reporting ADRs.

Role of Pharmacovigilance

1. Identifying, quantifying, and documenting drug-related problems.
2. Contributing to reducing the risk of drug-related problems in the healthcare system.
3. Increasing knowledge and understanding of factors and mechanisms responsible for drug-related injuries.

Pharmacovigilance is essential for ensuring the safety, quality, and efficacy of drugs by identifying, assessing, ensuring, and minimizing harmful effects. It benefits society and the healthcare system by boosting confidence in drug safety, ensuring the safety of drugs to minimize adverse effects, and maintaining drug efficacy to provide maximum benefit to patients.

Note : Schedule Y of the Drugs and Cosmetics Act (DCA) of 1945, which addresses drug safety, was thoroughly amended on January 20, 2005. This amendment introduced detailed pharmacovigilance obligations for companies aiming to manufacture and market new drugs in India.

Schedule Y of the Drugs and Cosmetics Act includes regulations on

- Preclinical and clinical studies for developing new drugs.
- Clinical trial requirements for importing drugs.
- Manufacturing and obtaining marketing approvals for new drugs in India.
- The continued commitment of the DCGI (Drugs Controller General of India) to ensure pharmaceutical companies comply with pharmacovigilance obligations.
- Clear responsibilities for pharmaceutical companies regarding their marketed products and reporting adverse events from clinical trials.

Reporting Form

Pharmacovigilance of Ayurveda, siddha, Unani and Homoepathy (ASU & H) Drugs

Reporting form for Suspected Adverse Reaction

Note:

1. Personal information of the consumers/ patients/ ADR reporter's will be kept confidential.
2. All suspected reations are to be reported with relevent detailds.
3. All completed forms are to be submitted to the program coordinator of nearby centre.

	A/U/S/H
Code	Ay-NIA/ Code of peripheral Centre/ADR Number/ year
	Ay-IPGT/ Code of peripheral Centre/ADR Number/ year
	Un-NIUM/ Code of peripheral Centre/ADR Number/ year
	Si-NIS/ Code of peripheral Centre/ADR Number/ year
	Ho-NIH/ Code of peripheral Centre/ADR Number/ year

1. Patient/consumer identification (please complete or tick boxes below as appropriate)

Name		Patient Record Number (PRN)
Place of Birth	IPD/OPD	
Address		Age:
Village/ Town		Sex: Male/ Female
Post / Via		
District/ State		
Diagnosis:	Constitution and temperament:	

2. Description of the suspected adverse Reactions

Date and time of initial observation	
Description of reaction	

3. Whether the patient is Suffering with any chronic disorders?

Hepatic Renal Cardiac Diabetes Any others

4. Addictions, if any? If yes, Please Specify:

5. H/O previous allergies/ Drug reactions, if any: If yes, please specify:

6. List of all ASU & H drugs used by the patient during the period of one month:

Name of the drug	Manufactures/ Batch no.	Dose	Form/Route of administration	Date of		Reason for use	Any unwanted occurrences
				Starting	Stopped/ Continued		

7. List of other drugs used by the patient during the period of one month:

Name of the drug	Manufactures/ Batch no.	Dose	Form/Route of administration	Date of		Reason for use	Any unwanted occurrences
				Starting	Stopped/ Continued		

8. Details of the drug suspected to cause ADR:

- Name of the drug:
- Manufacturing date and Expiry date (if available):
- Remaining pack/label (if available):
- Consumed orally along with (water/milk/honey/or any other)
- Whether any dietary precautions have been prescribed?
- If yes, please specify:
- Whether the drug is consumed under medical supervision or used as self medication.
- Any other relevant information associated with drug use:

9. Management provided/taken for suspected adverse reaction

10. Please indicate outcome of the suspected adverse reaction (tick appropriate)

Recovered	Not Recovered	Unknown	Fatal:	If fatal Date of death
Severe: yes/no		Reaction abated after drug stopped or dose reduced		
		Reaction reappeared re administration of drug:		
Was the patient admitted to hospital? If yes, give name and address of hospital				

11. Any abnormal findings of relevant laboratory investigationds related to the episode done pre and post episode of ADR:

12. Particulars of ADR Reporter:

Please tick: Patient/Attendant/ Nurse/ Doctor/ Pharmacist/ Health worker/ Drug Manufacturer/ Any others (Please specify)
Name
Address
Telephone/ E-mail:

Signature of the reporter: Date:

Please send the completed form to: The centre from where the form is received or do All India Institute of Ayurveda, Sarita Vihar, New Delhi-110076

Email: Pharmacovigilanceayush@gmail.com

The ADR Probability Scale

(Program coordinator has to fill this scale)

	Question	Yes	No	Don't Know
1.	Are there previous conclusive reports on the reactions?	+1	0	0
2.	Did the ADR appear after the suspected drug was adminstered?	+2	-1	0
3.	Did the ADR improve when the drug was discontinued a specific antagonisit was administered?	+1	0	0
4.	Did the adverse reaction reappear when the drug was readministered?	+2	-1	0
5.	Are there alternatives causes that could solely have caused the ADR/	-1	+2	0
6.	Was the drug detected in the blood (or other fluids) in a concentrationd Known to be toxic?	+1	0	0
7.	Was the reaction more severe when the dose was increased, or less severe when the dose was decreased?	+1	0	0
8.	Did the patient have a similar reaction to the same or similar drugs in any previous exposure?	+1	0	0
9.	was the adverse event confirmed by objective evidence?	+1	0	0
	Total Score			

Score:> 9= Certain; 5-8 = probable; 1-4= possible; 0=Unlikely

Signature

Program Coordinator

Central Sector Scheme and Centres of Pharmacovigilance of ASU & H Drugs

The Central Sector Scheme for promoting pharmacovigilance of Ayurveda, Siddha, Unani, and Homoeopathy (ASU&H) drugs is an initiative by the Ministry of AYUSH, Government of India. The scheme aims to monitor the safety of traditional medicine products and detect any adverse reactions or side effects.

The Centres of Pharmacovigilance are institutions established under this scheme to collect, analyze, and disseminate information related to adverse drug reactions (ADRs) of ASU&H drugs. These centers are responsible for:

1. Monitoring and reporting ADRs
2. Conducting pharmacovigilance activities
3. Providing safety information to healthcare professionals and consumers
4. Collaborating with national and international pharmacovigilance agencies

The main objectives of the scheme are:

1. To establish a robust pharmacovigilance system for ASU&H drugs
2. To ensure the safe use of traditional medicine products
3. To promote rational use of ASU&H drugs
4. To contribute to the global pharmacovigilance efforts.

At A Glance

Pharmacovigilance (PV) Overview

- PV encompasses the detection, assessment, understanding, and prevention of adverse effects of medicines throughout their lifecycle.
- It aims to reduce the risk of drug-related harms to patients by ensuring the safety and effectiveness of medications.
- PV includes clinical trial safety and post-marketing surveillance and plays a crucial role in drug regulatory compliance and enhancing safety.

Etymology and Definition

- The term "pharmacovigilance" combines "pharmaco," meaning medicine, with "vigilance," indicating alertness and attentiveness.
- PV is defined as the science and activities related to detecting, assessing, understanding, and preventing adverse effects or any other medicine-related problems.

History and Development

- Notable events like the thalidomide tragedy and the establishment of monitoring systems like the Yellow Cards System mark key milestones in PV history.
- In India, initiatives such as the National Pharmacovigilance Program and the Pharmacovigilance Programme of India have been established.

Key Terminology

- Adverse drug reactions (ADRs), adverse drug events, and side effects are essential terms in pharmacovigilance.

PV Centers and Programs in India

- India has several PV centers and programs, including the National Pharmacovigilance Programme for Ayurveda, Siddha, and Unani (ASU) drugs.

Role and Importance of Pharmacovigilance

- PV plays a critical role in identifying, quantifying, and documenting drug-related problems, reducing risks in healthcare systems, and increasing understanding of factors responsible for drug-related injuries.
- It is essential for ensuring drug safety, quality, and efficacy, maintaining confidence in drug safety, and providing maximum benefit to patients.

Reporting and Benefits

- Reporting ADRs is crucial, and anyone from clinicians to consumers can report them, contributing to drug safety.
- PV provides information about ADRs, aids in effective treatment, and helps detect rare ADRs.

Regulations and Obligations

- Schedule Y of the Drugs and Cosmetics Act of India includes regulations on preclinical and clinical studies, clinical trial requirements, manufacturing, and marketing approvals for new drugs, emphasizing pharmacovigilance obligations for pharmaceutical companies.

Multiple Choice Questions

1. **What is the primary goal of pharmacovigilance?**
   a. To develop new drugs
   b. To market pharmaceutical products
   c. To reduce the risk of drug-related harms to patients
   d. To increase drug sales
2. **Which organization in India initiated the National Pharmacovigilance Program in 2003?**
   a. Indian Medical Association
   b. Central Drug Standards Control Organization (CDSCO)
   c. Ministry of Health and Family Welfare
   d. World Health Organization (WHO)
3. **When did India join the WHO Adverse Drug Reaction (ADR) monitoring program?**
   a. 1986 c. 2004
   b. 1997 d. 2010
4. **What does the term 'adverse drug reaction' (ADR) mean?**
   a. A positive response to a medicine
   b. A noxious and unintended response to a medicine at normal doses
   c. A minor side effect of a drug
   d. Any beneficial effect of a drug
5. **Which amendment to the Federal Food, Drug, and Cosmetic Act required both safety and efficacy data for drugs?**
   a. 1962 c. 1964
   b. 1963 d. 1965
6. **What is the role of peripheral pharmacovigilance centers in India?**
   a. To develop new drugs
   b. To market pharmaceutical products
   c. To monitor adverse drug reactions
   d. To manufacture Ayurvedic drugs
7. **Which traditional medicine systems are included in India's National Pharmacovigilance Programme for ASU Drugs?**
   a. Allopathic and Homeopathy
   b. Ayurveda, Siddha, and Unani
   c. Chinese and Tibetan Medicine
   d. Naturopathy and Yoga
8. **What is the significance of the "Yellow Cards System" initiated in the UK in 1964?**
   a. To identify fake medicines
   b. To track drug efficacy
   c. To report adverse drug reactions
   d. To promote new drugs
9. **Which adverse drug event led to the withdrawal of Bromfenac (NSAID) from the market in 1998?**
   a. Liver necrosis
   b. Cardiovascular issues
   c. Serious hepatotoxic effects
   d. Severe allergic reactions
10. **What was the primary outcome of the comprehensive amendment to Schedule Y of the Drugs and Cosmetics Act in 2005?**
    a. Reduction in drug prices
    b. Introduction of pharmacovigilance obligations for new drug manufacturers
    c. Ban On certain herbal medicines
    d. Increase in the number of clinical trials

Answers Keys

1.	c	2.	b	3.	b	4.	b	5.	a
6.	c	7.	b	8.	c	9.	c	10.	b

Short Answer Questions (SAQ)

- Short Note on Pharmacovigilance.
- Write short note on National Pharmacovigilance Programme for ASU Drugs

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APPENDIX-I : BRIEF INTRODUCTION OF CLASSICAL DOSES FORM AND THEIR METHOD OF PREPARATION

1. PANCHVIDHA KASHAYA KALPANA

The term "Panchavidha Kashaya Kalpana" describes five fundamental methods for making herbal remedies. These techniques seek to improve the medication's efficacy, palatability, and shelf life. It includes:

1. Svarasa Kalpana
2. Kalka Kalpana
3. Kvatha Kalpana
4. Hima Kalpana
5. Phanta Kalpana

1.1 Svarasa Kalpana

In Ayurveda, juice (Svarasa) is the liquid extract of fresh, clean, green herbs obtained by squeezing, pressing, or using any tool. This juice is fresh.

1.2 Kalka Kalpana

Herbal paste, often referred to as Kalka, is a paste created by crushing and grinding fresh herbs. It also contains a paste composed of water and dry herbs. It is also known as Aavapa or Prakshepa. Nonetheless, herbal paste is referred to be Prakshepa if it is prepared by combining ghee, oil, or any other sour ingredient.

1.3 Kvatha Kalpana

The concoction made by boiling one part herbs in sixteen parts water until it is reduced to one-eighth part water is called a kvatha.

1.4 Hima Kalpana

In Ayurveda, the water obtained by soaking one part of herbs in six parts of water for the entire night, followed by cleaning and filtering in the morning, is called a cold infusion, or Hima.

1.5 Phanta Kalpana

Phanta is the term for the water that remains after adding hot water to herbs. Ratio of drug water is 1:4.

Shelf life: Instant Use (Saviryatavadhi)

2. CHURANA KALPANA

Churna is a dried form of Kalka Kalpana, often used to create Kalka. It refers to the powdered form of a single drug or a mixture of two or more drugs that have been powdered separately and then blended homogeneously. According to the Indian Ayurvedic formulary, Churna is a fine powder of medication or drug mixture. Sharngadhara lists synonyms for Churna as raja or kshoda, and it is administered in the dose of one karsha-parmana. Acharya Kashyapa describes Churna as a fine powder used for treating grahani-roga (digestive disorders), ama vikara (toxicity disorders), vrana (wounds), and as an anjana (collyrium for eyes). Acharya Sushruta also emphasizes the importance of Churna Kalpana in treatment, as noted in the Ashtanga Samgraha and Ashtanga Hridaya. The use of Churna Kalpana continues to increase over time.

GENERAL METHOD OF PREPARATION OF CHURNA KALPANA

1. **Selection of Raw Materials:**
   - Choose high-quality, pure, and properly identified medicinal herbs.
   - Ensure the herbs are free from contaminants, dirt, and other impurities.
2. **Cleaning:**
   - Clean the selected herbs thoroughly to remove dust, dirt, and foreign materials.
   - Washing might be required for some herbs to ensure cleanliness.

3. **Drying:**
   - Dry the cleaned herbs properly. This can be done using sunlight or shade, depending on the nature of the herb.
   - Ensure the herbs are completely dried to prevent mold growth and to ease the grinding process.
4. **Pulverization (Grinding):**
   - Grind the dried herbs into a fine powder using a suitable grinder or pulverizer.
   - Traditional methods use stone grinders, while modern methods may use electric grinders.
5. **Sieving:**
   - Sieve the ground powder to obtain a uniform and fine consistency.
   - Use a fine mesh sieve (typically 80-120 mesh) to ensure the powder is of uniform particle size.
6. **Mixing:**
   - If the Churna is a combination of multiple herbs, mix the individual powders thoroughly to ensure homogeneity.
   - Use a clean, dry mixing vessel and mix in a well-ventilated area.
7. **Storage:**
   - Store the prepared Churna in a clean, dry, and airtight container to protect it from moisture, light, and insects.
   - Label the container with the name of the Churna, date of preparation, and expiration date.
8. **Quality Control:**
   - Ensure the Churna is free from moisture and contamination.
   - Perform quality control tests to check for parameters like particle size, purity, and absence of contaminants.

Key Points to Remember

1. **Cleanliness**: Ensure all equipment and storage containers are clean and dry.
2. **Dryness**: Herbs must be completely dried to prevent microbial growth.
3. **Uniformity**: Achieve a uniform particle size for consistent therapeutic efficacy.
4. **Storage**: Protect the Churna from moisture, light, and pests to maintain its quality and efficacy.

3. Vati Kalpana

Vati Kalpana, as described in Ayurveda, is a potent and stable dosage form that is extensively detailed in the Sharngadhara Samhita. Acharya Sharngadhara has included various forms like Guda (jaggery), Gutika (pills), Vati (tablets), Pindi, Modaka, and Guggulu under the single heading of Vati in one chapter, showcasing their significance and versatility in Ayurvedic medicine. Binding agents are crucial in the preparation of Vati formulations. The primary binding agents used include:

1. Guda (Jaggery)
2. Sita (Sugar)
3. Guggulu
4. Madhu (Honey)
5. Gomutra (Cow Urine)
6. Svarasa (Fresh Juice)
7. Kvatha (Decoction)

These Agents Serve Multiple Purposes

1. **Consistency**: When subjected to heat, these binding agents melt and achieve the consistency of Avaleha (a semi-solid form). This ensures the powdered herbs mix thoroughly and bind well.
2. **Hardness and Friability**: The sticky nature of these agents provides the Vati with the required hardness and reduces friability, ensuring the tablets do not break easily.
3. **Therapeutic Benefits**: Many of these agents, such as Guggulu and Gomutra, have their therapeutic properties that complement the medicinal effects of the herbs used.

Preparation Process

The preparation process involves several steps to ensure the stability and efficacy of the Vati:

1. **Heating and Melting**: Guda is often heated alone or mixed in Kvatha and then heated. This melted Guda is then mixed with the herbal powders.
2. **Bhavana Dravya**: Gomutra, Svarasa, and Kvatha are used as Bhavana Dravya (wetting agents), which act as binding agents when Guda, Sita, and Madhu are not used. These agents help in faster dispersion of the Vati due to their inability to achieve Avaleha consistency.
3. **Mixing and Cooling**: The herbal mixture is added to the melted binding agent and mixed properly. Once the mixture cools down, it is shaped into Vati, ensuring proper hardness and reduced friability.

Types of Vati and their Formulation

Various formulations and their specific characteristics are outlined by Acharya Sharngadhara:

Guggulu Formulations: Guggulu is melted, herbal powders are added, and the mixture is shaped into

Pindakriti form and then into Gutika (pills) using mechanical force (Kuttana).

Modaka: Typically made of 1 Pala (4 Tola).

Sanjivani Vati: Made up of 1 Gunja.

Therapeutic Indications and Benefits

Acharya Sharngadhara's choice of binding agents like Guda, Guggulu, and Gomutra was not random. These agents were selected not only for their binding properties but also for their therapeutic benefits:

Guda: Known for its demulcent properties and used to treat conditions like cough and hoarseness of voice.

Guggulu: Renowned for its anti-inflammatory and lipid-lowering effects.

Gomutra: Used for its detoxifying and diuretic properties.

Variations in Dosage

The dosage of Vati formulations varies due to several factors:

1. **Characteristics of Dispersion:** The choice of binding agent affects how quickly the Vati disperses in the body.
2. **Bioavailability:** Different binding agents and preparation methods impact the bioavailability of the active ingredients.
3. **Therapeutic Use:** Depending on whether the Vati is used for therapeutic purposes, as a Rasayana (rejuvenative), or as a Vajikarana (aphrodisiac), the dosage and formulation may vary.

Vati Kalpana represents a sophisticated approach in Ayurvedic pharmaceutics, combining the art of formulation with therapeutic efficacy. The detailed procedures and thoughtful selection of ingredients by Acharya Sharngadhara highlight the profound understanding of herbal pharmacology and the importance of dosage forms in achieving optimal therapeutic outcomes.

4. Guggulu Kalpana

Guggulu is a resin derived from Commiphoramukul, a small tree known as Indian bedellium. The use of guggulu is first documented in the Sushruta Samhita, and it should be used one year after its collection. Nava guggulu acts as a rasayana (rejuvenative), while purana guggulu causes apakarshana (detoxification). Pharmaceutically, guggulu is used as a binding agent in the preparation of vati (tablets), in addition to its own pharmacological properties. Bhava Mishra describes five types of guggulu; the hiranyakshya variety should be used for humans, while other varieties are for veterinary purposes.

Guggulu is a suffix in many preparations, indicating guggulu kalpana (formulations) and its maximum quantity, such as in Yogaraja guggulu, Kaishora guggulu, and Trayodasanga guggulu. Guggulu is also an ingredient in many pharmaceutical forms, including vati, gutika, rasa kriya, kvatha, dhupa, churna, taila, ghrita, avaleha, and modaka. It is also used in preparations such as rasausadhies, lepa, and pradeha.

In the A.F.I., Part I, Second Revised English Edition, by the Government of India, Ministry of Health and Family Welfare, Dept. of I. S. M. and H. New Delhi, we find the authentic use of the following liquids for svedana in 'Dolayantra':

1. Gomutra (cow's urine)
2. Vasapatra svarasa or kashaya
3. Nirgundi svarasa with Haridra churna

General Method of Preparation of Guggulu Kalpana with Agni

1. One part of purified guggulu and one part of dravya churna (powdered ingredients) are mixed for the preparation of guggulu kalpana.
2. Shodhita (purified) guggulu should be mixed with the prescribed quantity of water and prepared as paka by heating, similar to guda paka (jaggery preparation).
3. It is then mixed with the powders of the prescribed ingredients with constant stirring and rolled into vati form by adding a small quantity of ghee to maintain the soft consistency of the guggulu and to prevent it from sticking to the hands while rolling the pills.

Without Agni

1. Shuddha guggulu is pounded rigorously, either manually or in a pounding machine, by adding fine powder of medicinal drugs little by little.
2. When all the medicinal drugs are evenly incorporated into the guggulu and the mixture turns smoother with the required consistency for rolling the pills, the pills of desired size and shape are rolled.
3. These pills are dried in the shade and stored in airtight containers for further therapeutic use.
4. Nowadays, guggulu preparations are manufactured using modern tablet methodologies.

5. Avaleha Kalpana

Definition

Avaleha is a semi-solid preparation of drugs. It is made with jaggery, sugar, or sugar-candy, and boiled with

prescribed drug juice or decoction. Also known as modaka, guda, khanda, rasayana, leha, etc.

Method of Preparation

1. Collect the essential ingredients like—
   - Kashaya or other liquids.
   - Jaggery, sugar, or sugar-candy.
   - Powders or pulps of certain drugs.
   - Ghee or oil and honey.
2. Dissolve jaggery, sugar, or sugar-candy in the liquid and strain to remove foreign particles.
3. Boil the solution over moderate fire.
4. Check readiness by testing if the mixture is thready (tantuvat) when pressed between fingers or sinks in water without dissolving easily.
5. Remove from fire.
6. Add fine powders of drugs in small quantities, stirring continuously to form a homogenous mixture.
7. Add ghee or oil while the mixture is still hot and mix well.
8. Add honey when the preparation is cool and mix well.

Characteristics

- Lehya should be neither too hard nor too fluid.
- Should be rollable between fingers if pulp and ghee or oil are present.
- Signs of deterioration include growth of fungus or fermentation.
- Use bhasmas of metals when metals are mentioned.
- Include only purified drugs for items like bhallataka.
- Colour and smell depend on the drugs used.

Preservation and Storage

- Store in glass or porcelain jars.
- Can also be kept in non-reactive metal containers.
- Normally used within one year.

6. Sneha Kalpana (Ghrita/ Taila)

Definition

Tailas are medicinal oils prepared by boiling oil (taila) with decoctions (kashayas) and pastes (kalkas) of drugs to absorb their therapeutic properties.

General Method of Preparation

1. Collect all the components like—
   - Drava Dravya
   - Kalka
   - Sneha Dravya
2. Mix kalka and drava, then add sneha.
3. Boil on mild fire, stirring continuously to prevent sticking.
4. Add drava-dravyas sequentially, allowing evaporation of earlier additions.
5. When all drava-dravyas evaporate, moisture in kalka evaporates. Stir frequently to avoid sticking. Test kalka to check paka stage.

Paka Stages

- **Mridu Paka:** Waxy kalka that rolls like lac.
- **Madhyama Paka:** Harder kalka that burns without noise.
- **Khara Paka:** Further heating to hard state; beyond this, sneha becomes unfit. Correct stage is indicated by froth.

7. Asava Arishta

Definition

Asavas and Arishtas are medicinal preparations. It is made by soaking drugs in powder form or decoction (kashaya) in a solution of sugar or jaggery. It undergo fermentation, generating alcohol. Alcohol facilitates extraction of active principles and acts as a preservative.

Method of Preparation

Arishta

1. Drugs are coarsely powdered and kashaya is prepared.
2. Kashaya is strained and placed in a fermentation vessel.
3. Sugar, jaggery, or honey is dissolved, boiled, filtered, and added.
4. Prakshepa dravyas are finely powdered and added.
5. Dhataki pushpa (if included) is cleaned and added.
6. Vessel is covered with an earthen lid and edges sealed with clay-smeared cloth in seven layers.
7. Kept in a special room, underground cellar, or paddy heap to maintain constant temperature.
8. After fermentation, lid is removed and contents examined.
9. Fluid is decanted and strained after 2-3 days.
10. Strained again after fine particles settle and then bottled.

Asava

1. Water and prescribed jaggery or sugar are boiled and cooled.
2. Poured into fermentation vessel.
3. Fine powder of drugs mentioned in the formula is added.

4. Vessel is covered with a lid and edges sealed with clay-smeared cloth in seven layers.
5. Follow the same process as Arishta.

General Precautions

- Use old earthen vessels, not new ones.
- Boil water in vessel first.
- Maintain absolute cleanliness.
- Fumigate inner surface with pippali churna and smear with ghee before pouring liquids.
- Large scale manufacture may use wooden vats, porcelain jars, or metal vessels.

Characteristics

- Filtered Asava or Arishta should be clear without froth at the top.
- Should not become sour (chukra).
- Should have an aromatic alcoholic odor.

Preservation

- Can be kept indefinitely.
- Should be stored in well-stoppered bottles or jars.

8. Bhasma Prakarana

Definition

Bhasma are calcined powder of metals, minerals, or animal products, using cow dung cakes (puta).

Method of Preparation

1. **First Stage**: Sodhana (Purification)
   - Purpose: Eliminate harmful matter, modify properties, convert characteristics, and enhance therapeutic action.
   - Types:
     - **Samanya Shodhana:** General purification (e.g., heating metal sheets, immersing in taila, takra, gomutra).
     - **Vishesa Shodhana:** Specific purification (e.g., bhavana, svedana, mardana).
2. **Second Stage**: Marana (Calcination)
   - **Preparation:**
     - Grind purified drug with plant juices or kashayas.
     - Form and sun-dry small cakes (chakrikas).
   - **Calcination:**
     - Seal cakes in earthen plates.
     - Place in a pit filled with cow dung cakes, ignite, cool, and grind into fine powder.
   - **Repetition:** Repeat trituration, chakrikas making, and puta process as needed.

Types of Putas

1. Maha Puta
2. Gaja Puta
3. Varaha Puta
4. Kukkuta Puta
5. Kapota Puta
6. Bhanda Puta

Tests for Proper Bhasma

- No metallic luster.
- Fine enough for finger lines.
- Floats on water.
- Does not revert to original state.

Storage: Airtight glass or earthen containers, potency maintained indefinitely.

9. Pishti

Definition

Medicines prepared by triturating the drug with specified liquids and exposing it to sun or moonlight, known as anagnitapta bhasma (bhasma prepared without fire).

Method of Preparation

1. Take Shodhita (Purified) drug.
2. The shodhita drug is placed in a khalva.
3. It is triturated with rose water (unless otherwise specified) for a day.
4. The triturated drug is dried in the sun for another day.
5. This process is repeated for seven days or more until a fine powder, pisti, is obtained.

Characteristics and Preservation

- **Colour**: Varies depending on the drug used.
- **Texture**: As fine as bhasma, with similar characteristics.
- **Potency**: Preserves potency indefinitely.
- **Storage**: Stored in glass stoppered bottles.

10. Kharliya Rasayana

Kharaliya Rasayana is one of the most commonly utilized Parad Murchchhita Aushadha Vargikarana formulations in Ayurveda, recommended extensively across various disease conditions. The formulations that are prepared in a Kharala (mortar) by triturating until they attain the chief desired characteristics are known as Kharaliya Rasayana. It is a common dosage form in Ayurvedic medicine, containing metals and minerals, and is widely used in clinical practice. The principles of Bhavana and Mardana Samskara form the backbone

of Kharaliya Rasayana preparation, ensuring both its therapeutic efficacy and safety. Bhavana, a Samskara process, alters the original properties of raw drugs, inducing new ones in the main drugs. Mardana and Bhavana Samskara play a pivotal role in ensuring the intimate contact of material particles with the liquid media, facilitating the impregnation of media properties into the material, and transforming coarse powder into a finer state to aid further processing. This process results in unique and suitable physico-chemical changes that enhance the efficacy of the material. The Mardana and Bhavana processes thus contribute significantly to the production of quality medicines, particularly Kharaliya Rasayana. Kharaliya Rasayana, prepared in classical ways, is both safe and effective for clinical practice in therapeutic doses.

Unique Features

1. Prolonged Shelf Life
2. Increase Therapeutic Efficacy
3. Decrease Dosage
4. Decrease Duration of Treatment.

Shelf Life

According to Drug and Cosmetic Rules 2016 Rule No. 161-B.

a. Rasayoga containing Kaushthaushadi along with Rasa/ Uparasa etc- 5 Years.
b. Rasayoga Containing only Rasa, Uparasa Etc - 10 Years.
c. Rasayoga containing Naga, Vanga and Tamra bhasma - 5 Years

11. Parpati Kalpana

Liquefied Kajjali is poured over neatly arranged mocha patra (shalmali patra) or another suitable leaf to create a thin wafer (papada). This method, called pota bandha of parada, produces Parpati.

Method of Preparation

1. Triturate purified mercury and sulphur to make Kajjali.
2. Mix other ingredients in the khalva.
3. Heat the mixture in an iron vessel using a Sikata yantra.
4. Line a pit in cow dung with a leaf.
5. Pour the melted medicine onto the leaf.
6. Cover with another leaf and press gently with cow dung.
7. Allow to cool.
8. Powder the cooled medicine for use.

Pathya (Favourable Factors):

1. Kakamachi
2. Patola
3. Adraka (ginger)
4. Vastu (hogweed)
5. Kadali Pushpa (banana flower)
6. Nava Vartaka
7. Purana Dhanya (old grains)
8. Go-Dugdha (cow's milk)

Apathya (Unfavourable Factors)

During parpati kalpana therapy, it is advised to avoid drinking river or well water for quenching thirst; instead, consume plenty of buttermilk.

Storage: Kept in dark clour glass bottles.

12. Kupipakva Kalpana

Kupipakva rasayana refers to formulations created by applying specific heat to purified mercury (shuddha parada), purified sulphur (shuddha gandhaka), and other rasadravya in a chosen glass bottle, following the distinctive preparation method outlined in traditional texts.

General Method of Preparation

Purva Karma

1. Collect all the essential equipments (Raw material, Kupi, Kapada Mitti, Valuka Yantra, Shita shalaka, Tapta Shalaka, Pyrometer, etc.).

Pradhana Karma

1. Shuddha parada and shuddha gandhaka are triturated continuously in a khalva yantra for 4 to 5 days.
2. The resulting kajjali may undergo bhavana with any mentioned bhavana dravya.
3. Metallic foils like svarnapatra, if included, are carefully cut into smaller pieces and added to the khalva yantra.
4. Equal quantities of shuddha parada are then added to the mixture and triturated rigorously for 4 to 5 days until a fine drug paste is obtained.
5. The resulting drug mass is then triturated with the specified quantity of gandhaka for 2 to 3 days.
6. Optionally, this kajjali may undergo further bhavana.
7. The bhavita kajjali is carefully collected and filled into a bottle (Kupi).
8. Seven layers of mritvastralepana must be applied to the bottle.

9. Ensure that only ¼ to 1/3 of the bottle is filled with kajjali.
10. Temporarily close the mouth of the bottle with a cork and firmly place it in the Valuka yantra.

Pashchat Karma

1. Kupi Uddharana
2. Kupi Bhedana

Storage: Protect from moisture, light, and pests to maintain its quality and efficacy.

13. Pottali Kalpana

Pottali Kalpana is a consolidated form of mercurial preparation incorporating the Pota Bandha of Parada. Pottali is a type of preparation that results from Parada Murchhana, a procedure where mercury is thoroughly ground with other herbo-mineral drugs to enhance its therapeutic efficiency.

General Method of Pottali Kalpana

1. Bhavana Samskara

- Purify, process, and incinerate (if adding Bhasma) all ingredients.
- Finely powder the ingredients.
- Subject the powdered ingredients to Bhavana in a Khalva Yantra with herbal liquid media (usually Kumari pulp if unspecified).
- Continue Bhavana until the mixture is viscous and semisolid.
- Repeat the procedure 3 to 7 times, examining the Subhavita Lakshana.
- Collect, dry, powder, and preserve the final mixture.

2. Puta Paka Samskara

- Purify and incinerate metalo-mineral ingredients.
- Triturate with herbal media until uniform.
- Incinerate using techniques like Gaja Puta.
- Use Kaparda or Musha methods for specific preparations.

3. Pottali Paka

- Select appropriate metals, minerals, and herbs.
- Use herbal extracts like Kumari Svarasa for Bhavana.
- Determine the Pottali shape (e.g., pyramid, conical).
- Ensure proper drying of Pottali.
- Choose suitable storage containers.
- Wrap Pottali in silk cloth for Gandhaka Paka.
- Use prescribed sulphur quantity (equal to or 2-times Pottali weight).
- Control and measure heat intensity (Agni Pramana).
- Follow specified Paka Kala durations (1-8 hours or until Vyoma Varna).
- Confirm Paka Lakshana by sulphur color change and metallic sound.
- Remove and clean Pottali after Paka, store for therapeutic use.

14. Sattava Kalpana

Definition

Sattva is a water-extractable solid substance collected from a drug.

Method of Preparation

1. Cut the drug into small pieces.
2. Soak the pieces in water and leave them overnight.
3. Strain the mixture through a cloth.
4. Allow the solid matter to settle.
5. Carefully pour off the supernatant liquid.
6. Repeat the process by adding water, straining, and decanting.
7. Allow the sedimented sattva to dry.
8. Once dry, powder the sattva.

Preservation and Characteristics

Store in a closed container and the color of sattva varies depending on the drug used.

15. Lepa Kalpana

Definition

Medicines in the form of a paste used for external application.

Method of Preparation

1. Drugs are ground into a fine powder.
2. Before use on the body, the powder is mixed with a specific liquid or medium to form a soft paste.
3. Common media for mixing include water, cow's urine, oil, and ghee.

Rule 161B of Drugs and Cosmetics Rule, 1945

1. **Lepa Churna**: Self-life period is 1 year.
2. **Lepa Malahara**: Self-life period is 2 years.
3. **Lepa Guti**: Self-life period is 3 years.

Appendix-II : List of Disease and its English Equivalent Terms

1.	Abhishyanda	—	Conjunctivitis
2.	Adhmana	—	Flatulence with gurgling sound
3.	Agnimandya	—	Digestive Impairment
4.	Amaatisara	—	Diarrhoea due to indigestion
5.	Amalapitta	—	Hyperacidity
6.	Amajvara	—	Fever due to indigestion
7.	Amavata	—	Rheumatism
8.	Anaha	—	Distension of abdomen
9.	Anidra	—	Insomnia
10.	Antra Vriddhi	—	Internal abscess
11.	Apachi	—	Chronic Lymphadenopathy
12.	Apasmara	—	Epilepsy
13.	Arbuda	—	Tumor
14.	Arsha	—	Piles
15.	Artava Ruja	—	Dysmenorrhea
16.	Aruchi	—	Tastelessness
17.	Ashmari	—	Calculus
18.	Asrigdara	—	Menorrhagia or Metrorrhagia or both
19.	Asrgdara Ruja	—	Dysmenorrhea
20.	Atisara	—	Diarrhea
21.	Bagandara	—	Fistula-in-ano
22.	Bahumutra	—	Polyuria
23.	Bala Roga	—	Specific disorder of children
24.	Badhiratva	—	Deafness
25.	Bhasmaka Roga	—	Polyphagia with mascular wasting
26.	Bhrama	—	Vertigo
27.	Bhuta Badha	—	Psychological Disorder
28.	Buddhi Daurbalya	—	Weak Intelligence
29.	Chamkila	—	Skin Disease
30.	Chhardi	—	Emesis
31.	Dadru	—	Teaniasis
32.	Daha	—	Burning Sensation
33.	Dantobhava Jvara	—	Dentitorial Fever
34.	Daurbalya	—	Weakness
35.	Dhatu Kshaya	—	Tissue Wasting
36.	Dushta Vrana	—	Non- Healing Ulcer
37.	Galagraha	—	Difficulty in Swallowing
38.	Galashosha	—	Dryness in Throat
39.	Gandamala	—	Cervical Lymphadenitis
40.	Garavisha	—	Accumulated Poison
41.	Garbhashaya-chyuti	—	Uterine Prolapse
42.	Graha Dosha	—	Certain Psychotic Syndrome
43.	Grahani	—	Malabsorption
44.	Gulma	—	Abdominal Lump
45.	Hikka	—	Hiccup
46.	Hridaurbalya	—	Weakness of Heart
47.	Hridshula	—	Angina Pectoris
48.	Janu Stambha	—	Stiffness of knee
49.	Jalodara	—	Ascites
50.	Jara	—	Progeriasis
51.	Jihvastambha	—	Glossy Plasy
52.	Jirna Jvara	—	Chronic fever
53.	Jirna Kasa	—	Chronic Cough
54.	Kamala	—	Jaundice
55.	Kancha Roga	—	Cataract
56.	Kandu	—	Itching
57.	Kaphajasandhi-bandha	—	Stiffness of joint due to Kapha Dosha
58.	Karna Srava	—	Otorrhoea
59.	Kasa	—	Cough
60.	Kilasa	—	Vitiligo
61.	Krimi	—	Worm Infestation
62.	Krisata	—	Emaciation
63.	Kshaya	—	Phthisis
64.	Kushtha	—	Psoriasis
65.	Madatyaya	—	Alcoholism
66.	Majjagata Vata	—	Bone Marrow Related Disorder
67.	Mandagni	—	Dyspepsia
68.	Manovikara	—	Mental Disorder
69.	Medhya	—	Brain Tonic
70.	Meha	—	Excessive flow of urine
71.	Mukhashosha	—	Dryness of Mouth
72.	Mutraghata	—	Urinary Obstruction
73.	Mutrakri-chchhra	—	Dysuria
74.	Mutraroga	—	Urinary Disease
75.	Nadi Vrana	—	Sinus
76.	Napumsakta	—	Impotency
77.	Netra Sarava		Epiphora
78.	Netrakandu	—	Itching in Eyes
79.	Netraroga	—	Disease of eyes
80.	Pakshaghata	—	Paralysis
81.	Palitya	—	Graying of Hairs
82.	Pama	—	Eczema
83.	Pandu	—	Anaemia
84.	Parinama Shula	—	Duodenal Ulcer
85.	Patala roga	—	Disorders of Layers of eye
86.	Phakka Roga	—	Rickets
87.	Pinasa	—	Rhinitis/ Sinusitis
88.	Pippasa	—	Thirst
89.	Pittaja Unmada	—	Psychosis Due to Pitta Dosha
90.	Plihodara	—	Splenomegaly
91.	Pralapa	—	Delirium
92.	Prameha	—	Increased Frequency of Urine
93.	Prasveda	—	Excessive Sweating
94.	Pratikshaya	—	Coryza
95.	Rajahkrichchhra	—	Oligomenerrhoea
96.	Rajayakshma	—	Tuberculosis

97.	Raktapitta	—	Bleeding Disorder
98.	Raktapradara	—	Menorrhagia or Metrorrhagia or both
99.	Raktarsha	—	Bleeding Piles
100.	Rasayana	—	Rejuvenating Agents
101.	Sandhigata Vata	—	Osteoarthropathy
102.	Sannipattaja jvara	—	High fever due to Vitiation of all doshas
103.	Sharira Varna	—	Loss of Body Complexion
104.	Shitapitta	—	Urticaria
105.	Shotha	—	Inflammation
106.	Smritiprada	—	Provides Memory
107.	Smrti Bhramsha	—	Dementia
108.	Snayudaurbalya	—	Weakness of Ligament
109.	Somaroga	—	Polyuria in Females
110.	Shosha	—	Cachexia
111.	Sphota	—	Boil
112.	Stanyadvesha	—	Aversion to breast milk
113.	Shukra Dosha	—	Vitiation of Sperm
114.	Shukrakshaya	—	Oligospermia
115.	Shula	—	Pain
116.	Sutikaroga	—	Puerperal Fever
117.	Svitra	—	Vitiligo
118.	Svarabeda	—	Hoarseness of Voice
119.	Svasa	—	Dysponea
120.	Sveta Pradara	—	Leucorrhoea
121.	Tila Kalka	—	Non- Elevated mole
122.	Timira	—	Cataract
123.	Trishna	—	Thirst
124.	Udara Roga	—	Disease of Abdomen
125.	Unmada	—	Psychosis
126.	Uroroga	—	Disease of thorax
127.	Urusthambha Roga	—	Stiffness in the thigh muscles
128.	Vaivarnya	—	Discolouration
129.	Vaktra Ruja	—	Pain in Mouth
130.	Vali	—	Wrinkles in the skin
131.	Vamana	—	Vomiting
132.	Vandhyatva	—	Infertility
133.	Vatarakhta	—	Gout
134.	Vibandha	—	Constipation
135.	Vidradi	—	Abscess
136.	Viryakshaya	—	Azoospermia
137.	Visarpa	—	Erysepales
138.	Visha vikara	—	Disorder due to poison
139.	Vrishya Shakti	—	Aphrodisiac Strength
140.	Yakritpliha roga	—	Disease of liver and Spleen
141.	Yoniruja	—	Pain in Female genital tract

APPENDIX-III : WEIGHT AND MEASURES

The following table of metric equivalents of weights and measures in the Ayurvedic classics have been approved by the Ayurveda Pharmacopoeia Committee in consultation with Indian Standards Institution.

Classical Unit	Metric Equivalent
1 Ratti or Gunja	125 mg
1 Masha	1 gm
12 Masha	12 gms
1 Tola/ Karsha	12 gms
2 Karsha	24 gms
1 Pala	48 gms
1 Prasriti	96 gms

Classical Unit	Metric Equivalent
1 Kudava	192 gms
1 Manika	384 gms
1 Prastha	768 gms
1 Adhaka	3 kg. 73 gms
1 Drona	12 kg.228 gms
1 Shurpa	24 kg. 576 gms
1 Droni	49 kg. 152 gms
1 Khari	196 kg. 608 gms
1 Tula	4 kg. 800 gms
20 Tula/ 1 Bhara	96 kg.

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1.	Abhraka Bhasma	3.1
2.	Amalaki Svarasa	2.2.A
3.	Amalakyadi Churna	2.2.B
4.	Amalakyadi Gutika	2.2.F
5.	Amritarishta	2.1.H
6.	Amritadi Guggulu	2.1.G
7.	Anandabhairava Rasa	4.1.F
8.	Aravindasava	5.20
9.	Arjuna Kshirapaka	7.7
10.	Arogyavardhini Gutika	4.1.A
11.	Ashokarishta	5.21
12.	Aushadi Prayoga Vigyana	1
13.	Aushadi Prayoga Marga	9
14.	Bala Chaturbhadra Rasa	5.10
15.	Bhallataka Avaleha	2.3.E
16.	Bhallataka Ghrita	2.3.E
17.	Bhallataka Guda	2.3.C
18.	Bhallataka Modaka	2.3.A
19.	Bhallatakadi Kvatha	2.3.G
20.	Bhallatakadi Lepa	2.3.F
21.	Bhallatakadi Taila	2.3.D
22.	Bilvadi Gutika	5.6
23.	Bola Parpati	4.2.B
24.	Brahma Rasayana	7.10
25.	Brahmi Ghrita	5.16
26.	Brihat Vata Chintamani Rasa	4.1.K
27.	Bhringaraja Taila	9.5.F
28.	Chandraprabha Vati	4.1.D
29.	Chavanaprasha Avaleha	2.2.D, 7.3
30.	Chitrakadi Gutika	5.7
31.	Dadimavaleha	5.14
32.	Dashamula Kvatha	5.1
33.	Dhatri Lauha	2.2.E
34.	Dosage Form and Cosmetic Products	6
35.	Gairika Pradeha	2.5.A
36.	Gairika rasakriya	2.5.E
37.	Gairikadya Gutikanjana	2.5.D
38.	Gairikadya Malahara	2.5.C
39.	Gandhaka Druti	2.4.C
40.	Gandhaka Rasayana	2.4.B
41.	Gandhaka Taila	2.4.D
42.	Gandhaka Vati	2.4.G
43.	Gandhakadi Lepa	2.4.F
44.	Gandhakadya Malahara	2.4.E
45.	Garbhapala Rasa	4.1.C
46.	Guduchi Ghana- Samshamani Vati	2.1.E
47.	Guduchi Hima	2.1.D
48.	Guduchi Kvatha	2.1.C
49.	Guduchi Sattva	2.1.F
50.	Guduchi Svarasa	2.1.A
51.	Guduchyadi Churna	2.1.B
52.	Hasthi Danta Masi	9.5.G
53.	Hemagarbha Pottali	4.4.A
54.	Ichchhabhedi Rasa	4.1.Q, 9.5.H
55.	Jatyadi Taila	9.5.D
56.	Kaishora Guggulu	8.1
57.	Kamadudha Rasa	4.1.N
58.	Kankayana Vati	8.6
59.	Kashisha Bhasma	3.10
60.	Kharjuradi mantha	7.9
61.	Krimikuthara Rasa	4.1.R
62.	Kumara Kalyana Rasa	4.1.B
63.	Kumaryasava	5.22
64.	Kushmanda Avaleha	7.1
65.	Kutajarishta	5.23
66.	Laghusutashekhara Rasa	2.5.B
67.	Lauha Bhasma	3.5
68.	Lavana Bhaskara Churna	5.5
69.	Lakshmivilasa Rasa	4.1.H
70.	Lepa Guti	5.25

71.	Local Health Practices	11
72.	Lomashatana Lepa	9.5.I
73.	Makaradhvaja	4.3.B
74.	Mahamanjishtadi Kvatha	5.2
75.	Mukta Pishti	3.15
76.	Murivenna Taila	9.5.C
77.	Naga Bhasma	3.8
78.	Narayana Churna	8.3
79.	Narayana Taila	5.17
80.	Navayasa Loha	4.1.P
81.	Nilibhringadi Taila	6.18
82.	Nutraceuticals	7
83.	Panchagavya Ghrita	5.15
84.	Panchaguna Taila	5.19
85.	Panchamrita Parpati	4.2.A
86.	Phala Ghrita	7.4
87.	Phalatrikadi Kvatha	2.2.G
88.	Pharmacovigilance	12
89.	Pravala Panchamrita Rasa	4.1.E
90.	Pravala Bhasma	3.16
91.	Pravala Pishti	3.16
92.	Prinana Modaka	7.2
93.	Pushyanuga Churna	5.3
94.	Rajata Bhasma	3.4
95.	Rasa Parpati	8.5
96.	Rasa Sindura	8.4
97.	Rasona kshirapaka	7.8
98.	Rational Prescription	10
99.	Sahacharadi Taila	9.5.B
100.	Samirpannaga Rasa	4.3.C
101.	Sanjivani Vati	5.8
102.	Shankha Bhasma	3.19 ,9.5.E
103.	Safe Dispensing	10
104.	Shankha Vati	4.1.L
105.	Shatavari Ghrita	7.6
106.	Shuddha Gairika	3.13
107.	Shuddha Gandhaka	3.12
108.	Shuddha Shilajatu	3.11
109.	Shvasakuthara Rasa	4.1.M
110.	Simhanada Guggulu	5.11
111.	Saubhagya Shuntipaka	7.5
112.	Sudarshana Churna	5.4
113.	Sutashekhara Rasa	4.1.O
114.	Svarna Bhasma	3.3
115.	Svarna Makshika Bhasma	3.2
116.	Svarna Vanga	4.3.A
117.	Tamra Bhasma	3.6
118.	Traditional Health Practices	11
119.	Triphala Ghrita	2.2.H
120.	Triphala Rasayana	2.2.C
121.	TKDL	11
122.	Vanga Bhasma	3.7
123.	Varnakara Lepa	2.5.F
124.	Vasantakusumakara Rasa	4.1.I
125.	Vasantamalati Rasa	4.1.J
126.	Vyoshadi Vati	5.9
127.	Yashada Bhasma	3.9
128.	Yogaraja Guggulu	5.12, 8.2
129.	Yogendra Rasa	4.1.G

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